ARCHIVES

CHILD DEVELOPMENT READERS

ENGLISH DEPARTMENT
E. N. S.
PRIVATE PROPERTY

TEACHER'S MANUAL *for* HIGHWAYS AND BYWAYS

ENGLISH DEPARTMENT
E. N. S.
PRIVATE PROPERTY

CURRHIST
PE
1121
H14
1938
v.7
tch.man.

UGHTON MIFFLIN COMPANY

Ex libris
universitatis
albertaensis

THE CHILD DEVELOPMENT READERS

SIXTH GRADE MANUAL

To Accompany

HIGHWAYS AND BYWAYS

ENGLISH DEPARTMENT
E. N. S.
PRIVATE PROPERTY

HOUGHTON MIFFLIN COMPANY
BOSTON · NEW YORK · CHICAGO · DALLAS
ATLANTA · SAN FRANCISCO
The Riverside Press Cambridge

THE CHILD DEVELOPMENT READERS

EDITED BY JULIA LETHELD HAHN

COPYRIGHT, 1938, BY HOUGHTON MIFFLIN COMPANY

ALL RIGHTS RESERVED INCLUDING THE RIGHT TO REPRODUCE
THIS BOOK OR PARTS THEREOF IN ANY FORM

The Riverside Press
CAMBRIDGE · MASSACHUSETTS
PRINTED IN THE U.S.A.

UNIVERSITY
OF ALBERTA LIBRARY

CONTENTS

Introduction

Basic Purposes of Reading Instruction in the Intermediate Grades vii
Adequate Understanding of What is Read . viii
Utilizing Reading-Study Skills xii
Permanent Interests in Reading xiii
Experience in Oral Reading xiii
A Few Important Features of the Text ... xiv
Character of the content of the text xiv
Organization of the text xiv
Provision for reading readiness xv
Provision for reading-study skills xvii
Provision for oral reading activities xvii
Provision for encouraging further reading xvii
Provision for activities that may grow out of reading xviii
Instructional Reading Tests for the Intermediate Grades xviii
Nature and Purpose of the Tests xix
Validity and Reliability xx
Directions for Administering xxi
Directions for Computing Scores xxii
Norms xxii
Application of the Results xxiii
Form A xxv
Form B xxxi
Form C xxxvii
Organization of the Contents of This Manual xliii

Unit I. Prose, Poetry, and Drama

Purpose of the Unit 1
Preparation for Reading the Unit 1
Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills 7

514054

Teaching the Individual Selections..... 8
A Dog Named Spike... 8
Strange Waters..... 12
The Silver Bracelet.... 15
Tales Told in Verse.... 19
The King's Toothache. 20
Strings and Things.... 21
Making Your Own Play, The Mail Goes Through, and How to Make Scenery and Costumes..... 22
Suggested Activities for the Unit as a Whole. 24
A Written Test on Basal Concepts..... 25

Unit II. Work of Skillful Hands

Purpose of the Unit..... 27
Preparation for Reading the Unit..... 27
Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills.... 38
Teaching the Individual Selections..... 39
Gilds of Craftworkers, and Gilds in the Middle Ages..... 39
Plans for a Play, and From Apprentice to Journeyman..... 42
Makers of Books in Ancient Times, The Invention of Paper in China, and Famous Old Libraries..... 43
Swedish Weavers Long Ago and Now..... 47
Master Potters in China, and For the Emperor of China..... 50
Suggested Activities for the Unit as a Whole. 52
A Written Test on Basal Concepts..... 53

Unit III. Wonders of Our World

Purpose of the Unit..... 55
Preparation for Reading the Unit..... 55
Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills.... 65
Teaching the Individual Selections..... 66
The Science Club..... 66
The Petrified Fern..... 69

Creeping Ice..... 69
Lawrence and the Monarch Butterflies..... 73
The Tired Caterpillar.. 76
Shooting Stars..... 76
The Falling Star..... 79
Miracles..... 79
Suggested Activities for the Unit as a Whole. 80
A Written Test on Basal Concepts..... 80

Unit IV. In Hawaii

Purpose of the Unit..... 83
Preparation for Reading the Unit..... 83
Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills.... 90
Teaching the Individual Selections..... 91
Saved by a Shark..... 91
Two Girls at the Pond Gate, and Fishing by Torchlight..... 94
A Volcano Erupts, Pele, Goddess of the Volcano, and Restless Fires..... 97
A Plantation Day in Hawaii, Canes from the Head-Hunters, and Searching for Parasites..... 101
Suggested Activities for the Unit as a Whole. 105
A Written Test on Basal Concepts..... 105

Unit V. Inventions Change Ways of Living

Purpose of the Unit..... 107
Preparation for Reading the Unit..... 107
Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills.... 117
Teaching the Individual Selections..... 118
New Ways and Old Ways..... 118
On to Oregon, and The Oregon Trail..... 121
How Calico Saved a Farm.. 122
One Hundred Years Ago, and Philander's Fiddle..... 125
Skip to My Lou..... 129

The Runner Who Told of Victory..... 129
The Pony Express, the Pony Rider, and Other Great Discoveries..... 132
Suggested Activities for the Unit as a Whole. 132
A Written Test on Basal Concepts..... 133

Unit VI. Working Together

Purpose of the Unit..... 135
Preparation for Reading the Unit..... 135
Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills.... 140
Teaching the Individual Selections..... 141
Citizens' Park 141
Jed's Turkey..... 144
The Household Fairy.. 147
The A.B.C. Club..... 148
April's Christmas Silver 150
How to Make a Town Grow..... 153
Helen Learns One Way to be a Good Citizen 154
The Fatherland..... 157
Suggested Activities for the Unit as a Whole. 157
A Written Test on Basal Concepts..... 157

INTRODUCTION

THIS volume is the teacher's manual which accompanies *Highways and Byways*, the sixth-grade book of the *Child Development Readers*. It was made to be used. The authors hope and believe that the teacher will find within its pages many concrete suggestions which will enable her and her pupils to achieve the purposes for which *Highways and Byways* was created.

In order that the detailed suggestions contained in the manual may be clear to the teacher, it seems proper to present four brief statements in this introduction. The first explains certain basic purposes of reading instruction during the intermediate grades. The second statement describes a few of the most important features of the intermediate grade books in the *Child Development Readers*. The third describes the Intermediate Grade Reading Tests which are provided especially for use with this series of readers. The fourth indicates the organization of the material contained in this manual.

I. BASIC PURPOSES OF READING INSTRUCTION IN THE INTERMEDIATE GRADES

Any intermediate grade basal reader should carry out at least four large fundamental purposes. The *first* is concerned with helping the child to understand adequately what he attempts to read, and with the business of teaching him to demand meaning in the reading that he does. The *second* involves teaching him to utilize what are commonly known as reading-study skills. The *third* is concerned with

stimulating the development of a permanent interest in the reading of high-quality material in a wide variety of fields. The *fourth* requires the provision of opportunity for experience in sensible types of oral reading.

A. Adequate Understanding of What Is Read

This first purpose is by far the most important and the most fundamental. Plenty of available evidence shows that although intermediate-grade children are able to recognize and reproduce, orally or in writing, printed symbols at which they look, that although they are able to get across the page without difficulty in the mechanics of reading, the great majority of them do not understand adequately most of what they attempt to read and they are not particularly concerned about this lack of understanding. Too often the meanings they achieve in their reading are almost unbelievably wrong, vague, or inaccurate, and too seldom do they make any effort to put meaning into reading matter which they do not understand easily. When one realizes that there is no such thing as reading without the achievement of meaning, that the quality of reading is to be measured entirely by the degree and quality of the meaning achieved, and that every child should acquire the habit of insisting upon meaning when he reads, the importance of this first purpose is obvious.

The fundamental character of this first purpose is also clear when one realizes that back of the ability to utilize reading-study skills, back of really permanent interests in reading, back of the habit of reading widely in various fields, and back of success in sensible oral reading, *lies the ability and the desire really to understand material read.* Without

the achievement of this purpose, any or all other purposes cannot be realized.

At children's lack of understanding and their disconcerting indifference toward it, one should feel, or feign, neither indignant surprise nor offended pride. No one can justly blame pupils for faults that have been thoughtlessly created and permitted to grow. Systematic and sane efforts should be made to correct the bad habits and to avoid creating them. It is important, therefore, for the teacher to become acquainted with those few factors which, more than any others, make it possible for the child to understand adequately what he attempts to read.

It is obvious that in order to read with any degree of understanding, any pupil must have command over the so-called mechanics of reading. For example, he must be able to identify and recognize the printed forms of words and phrases. But the meager understanding that most intermediate-grade children achieve in reading is not due to serious deficiency in such matters; these children are not so-called remedial cases in the mechanics of reading. Their lack of understanding is due to factors that are much more fundamental than word recognition, eye movements, and related mechanics.

1. Concepts — the basic materials for constructing meanings. No one can secure adequate understanding in reading unless he possesses clearly and accurately the concepts that are commonly represented by the printed symbols on the page at which he looks. Printed symbols — words, phrases, etc. — do not give meaning to the reader. On the contrary, the reader brings meaning to the symbols. They act merely as triggers to stimulate him to recall or construct the concepts or meanings for which they stand. If the

reader possesses the concept represented by a given symbol, he has command of the first requisite for reading that symbol. If he does not possess the concept in question, it is utterly impossible for him to read (understand) the symbol even though he may be able to write it or speak it correctly. If the concept he possesses is characterized by depth, clarity, and accuracy, the comprehension he achieves when he looks at the symbol is of high degree and high quality. If the concept he possesses is false or vague, he achieves only misunderstanding or vague comprehension when he looks at the symbol.

Thus the source of meaning in reading *lies in the concepts or meanings that one possesses in his mind*, and the quantity and quality of the understanding he achieves in reading is determined by the character of these concepts. Every teacher should realize that her fundamental task in helping a pupil to read a given piece of material with adequate understanding is to aid him in constructing clear and accurate concepts that are represented by the printed symbols appearing in that piece of material.

2. Language facility — the tools for constructing meaning. A second factor that contributes greatly to the achievement of adequate meaning in reading is what may be called a reasonable degree of facility in using the English language. In the first place, the pupil must become familiar with the spoken word symbols, the oral labels that stand for the concepts he possesses. This is essential if he is to attach meaning to these symbols when he meets them in printed form. In the second place, because reading matter contains various types of complex sentences, the pupil must be able to sense the relationship between the parts of such sentences. Third, he should be able to use

language as a thinking tool to the degree that he can see the relationship between ideas, distinguish between relevant and irrelevant ideas, arrange ideas in proper sequence, and think his way through a problematic situation.

3. Interest — the motive power for constructing meaning. A third factor contributing to the degree and quality of understanding in reading is found in the relation that exists between the reader's interests and the content of the material read. When a given selection is closely related to the child's interests, or when he becomes interested in reading that selection, his comprehension of it is greatly increased. Furthermore, his concern about failure to understand and the amount of effort he puts forth to achieve meaning are also increased. On the other hand, when little if any relation exists between the pupil's interests and a given reading selection, his comprehension and his concern about failure to understand are decreased. This means that a third task for the teacher in making it possible for the child to read with adequate meaning is to help him to create a desire to read the selection to be read.

These three factors — construction of clear and accurate concepts, development of facility in using the English language, and the creation of a desire to read what is to be read — are, when taken together, nothing more than the heart of what we have come to call *reading readiness*. This means that, as defined herein, the establishment of readiness to read a given reading selection is the best available guarantee that the pupil will read that selection with adequate understanding, and that he will put forth serious effort to understand what the selection says.

B. Utilizing Reading-Study Skills

Effective learning by means of reading in science, in social studies, and in all other fields requires that the pupil be able to do more than merely understand what a printed sentence says. Here he must be able to work with books, and he must learn to manipulate the meanings that he achieves in reading in order to make sound judgments, draw valid conclusions, and engage in other activities involved in valid thinking. This will require definite instruction in the so-called reading-study abilities.

There are at least four of these important reading-study abilities. The first is *the ability to locate information.* This involves learning to use the different printed parts of a book including the index, the table of contents, maps, charts, graphs, and other aids appearing within a single volume. It involves also learning to use such common sources of information as the encyclopedia, the library card file, yearbooks, and the dictionary.

The second ability is *the ability to select material in the light of a problem.* This is essentially the ability to determine the appropriateness of a printed idea to the solution of the problem for which the reading is being done.

The third ability is *the ability to organize material read.* This involves learning to distinguish between main and subordinate points, learning to take notes, and learning to make outlines and summaries of material read.

The fourth ability is *the ability to decide what part of the material read should be retained for a given purpose, and how to secure its retention.* The teacher should realize that no program of reading instruction in the intermediate grades is complete without definite teaching of these reading-study

abilities, and that any basal reader should at least provide for introductory instruction in their use.

C. Permanent Interests in Reading

One of the major purposes of instruction in reading during the intermediate grades should be to help the child develop a permanent interest in reading many good writings in a wide variety of fields. Every intermediate grade pupil has the right to learn to want to read materials in the fields of science, biography, travel, social studies, art, music, industry, and in what is conventionally known as children's literature including poetry, modern fiction, legend, myth, drama, folk tales, and the like. Any basal reader should, therefore, in the choice of its selections, introduce the child to reading in a wide variety of fields.

Too much consideration cannot be given to carrying out this purpose. One of the real tests of the effectiveness of reading instruction in the intermediate grades is the amount and character of the voluntary reading that children do. Although in some localities there has been improvement during the past few years in increasing the amount and quality of children's voluntary reading, the present situation is nothing to be particularly proud of. Surveys show that the voluntary reading of intermediate grade children is, in general, too small in amount, too low in quality, and too limited in scope.

D. Experience in Oral Reading

From the standpoint of children's needs outside the school, instruction in oral reading is still important. Furthermore, the best teaching of literature requires that many

stories, plays, and poems be read aloud by the children if the creation of tastes for literature is to be fostered adequately. A fourth purpose of reading instruction during the intermediate grades, therefore, is to provide adequate opportunity for instruction in and the use of oral reading. Hence it seems reasonable to expect a basal reader to provide opportunity for oral reading activities.

It must be made clear, however, that sensible oral reading activities always involve an audience situation. A pupil should read aloud because he has a piece of information or an interesting selection which he wants or needs to share with his classmates. Members of his audience should listen to his reading because they need the information he reads in order to carry out some purpose, or because his selection is new or interesting to them.

II. A Few Important Features of the Text

1. Character of the content of the text. The text which this manual accompanies presents a wide variety of content including stories, poetry, folk tales, legends, biography, social studies, history, many of the sciences, engineering, travel, and other fields of human interest. The selections have been written and chosen in terms of their literary quality and interest appeal. This offering of a wide variety of interesting content should help in aiding the child to create an interest in reading good material in many different fields.

2. Organization of the text. The text is divided into six units. Each of these units seeks to develop a basal purpose or theme. The different reading selections, pictures, and activities included in a given unit were chosen with this purpose in mind. It should be clear, therefore, that the

various stories, poems, informative selections, pictures, and activities within a given unit must be considered and handled in the classroom, not only as matters that are interesting in their own right, but also as contributors to the realization of the purpose of that unit.

3. Provision for reading readiness. In order to improve the understanding with which pupils will read the text, and in order to help them learn to demand meaning in reading the various selections, literary or informational, provision has been made for the development of readiness to read each unit. In this manual, the teacher will find concrete suggestions for carrying on an *informal* discussion among the pupils *before* the reading of the unit is begun. In the text, the first part of each unit is composed of a series of photographs which are to be used with accompanying questions for the purpose of stimulating the discussion among pupils. *The whole purpose of this discussion,* stimulated by the photographs and questions, *is to help the child construct basal concepts or understandings needed in reading the unit, to make him familiar with the spoken symbols of these concepts, to develop facility for him in using the English language, and to help him create a desire to read the unit.*

Great care must be used in handling the discussion. As a builder of reading readiness, the discussion, with the use of the photographs, is a constructive activity. The purpose is to help the pupil to acquire essential concepts or understandings which he may not possess at all, and to clarify and broaden those which he may possess vaguely or narrowly. The teacher should understand clearly that it is *not* a testing or quizzing activity by which she attempts to discover whether the pupils have concepts necessary for reading the unit, or whether they are able to recognize printed word

forms included in the unit. It is *not* an activity in which the teacher asks questions and accepts perfunctory answers from the pupils.

Thus this pre-reading discussion should be free and informal. Pupils should be encouraged to talk back and forth about the experiences they have acquired through firsthand investigation, observation, reading, or listening, and which are related to what the photographs show. While the teacher must not resort to formal quizzing, she should direct the discussion as a co-operating member of the group. Her job, on the one hand, is to avoid aimless and frivolous talk with which the pupils soon become bored, and, on the other hand, to keep away from discussions that are so heavy and analytical that they kill the interest of most pupils. The satisfaction of discovering and sharing interesting information and opinions should pervade the entire discussion. The development of meanings and concepts needed for reading the unit should be the conscious purpose of the teacher, and the sure but unassigned result for the pupil.

In all informal discussions where opinions are expressed and questions are asked as freely as they should be, the teacher must expect the pupils, at times, to make incorrect answers to questions and to give inaccurate and vague statements. Complete answers to some questions may develop as the study of the unit progresses. A pupil should never be made to feel that he can enter the discussion only if he knows the complete answer to the question, or holds an opinion that is certain to meet the approval of the teacher. The teacher must hold fast to the idea that her job is not primarily one of discovering what the pupils know, but of helping them *to know more and to know it better.*

The questions and comments that are given in the manual for the reading-readiness period are, of course, only suggestive. Questions and comments which the pupils themselves originate during discussions are most valuable for the work, even though some of them wander afield at times. The length of time devoted to the pre-reading discussion should be determined by the requirements of the class. Several days might be spent with profitable results. Children should be encouraged to bring to the discussion other pictures, books, objects, and related materials that bear on the subject.

4. Provision for reading-study skills. At appropriate points in the text, opportunities for the use of reading-study skills are provided in connection with the utilization of particular selections especially suited to this purpose. This manual includes a chart for each unit, indicating which selections in that unit are adapted to the application of a given study skill. Illustrative exercises are also provided.

5. Provision for oral reading activities. Oral reading situations are described in this manual, and they are also embodied in the text. Experiences in oral reading are suggested to pupils by the reading activities of the book-children in the text. The text provides suitable prose and poetry selections for oral reading purposes. Important types of oral reading situations inherent in the text are (1) poetry hours, (2) dramatizations, assemblies, etc., (3) reading directions and recipes when all pupils need to hear them, (4) reading plans made by the class, (5) library hours, and (6) reading individual reports.

6. Provision for encouraging further reading. In addition to stimulating an interest in reading in various fields by means of its varied content, the text encourages further

reading by presenting an annotated bibliography of related reading selections at the close of each unit. Furthermore, the first unit in the text is a library unit which introduces the use of the library and varied source materials, and whets the child's appetite for reading interesting materials of a literary type.

7. Provision for activities that may grow out of reading. The ultimate test of whether the child has acquired a definite interest in reading is his voluntary use of reading to further a special interest aroused by the material read. At appropriate points in the text, usually at the close of each prose selection, suggestions are offered relative to activities which may be carried on by the pupils. Furthermore, the activities the book-children engage in will serve as stimulation. While many of these "things to do" represent a departure from the traditional type of activity suggested in many basal readers, their most important characteristic is that they constitute a sharpener, a utilization, to carry on similar activities, and a test of understandings which should be acquired through the reading of the selection.

III. Instructional Reading Tests for the Intermediate Grades [1]

FORMS A, B, AND C

The copies of the Intermediate Grade Reading Tests which appear in the following pages have been prepared by Dr. M. J. Nelson, Dean of the Faculty, Iowa State Teachers College. Similar tests, part of the series, will

[1] These tests, equipped with a Clapp-Young Self-Marking Device, may be purchased at a very reasonable price from the publisher, Houghton Mifflin Company. The use of the Clapp-Young Self-Marking Device makes scoring very simple and accurate and makes it possible to secure the score on each part of the test as well as the total score in a remarkably short time.

be found also in the manuals for *Tales and Travels* and *Exploring New Fields*.

Nature and Purpose of the Tests

The tests included in this manual are designed to serve as a measure of reading ability of pupils in grade six. There are three forms of each test. Although the tests may be used at any time that the teacher or administrator sees fit, it is suggested that Form A be used near the beginning of the year, Form B about mid-year, and Form C near the close of the year. With such a testing program, it is possible for the teacher to note whether the progress of the class as a whole and of individual pupils has been satisfactory. In addition to indicating progress in the general processes of reading, the tests are so devised as to be somewhat diagnostic. The questions on each paragraph in these tests have been designed as at least a partial measure of pupils' "reading readiness" in the intermediate grades. They will reveal: (1) the extent of the pupils' background for making meaning for a selected group of words that appear frequently in intermediate reading, and (2) understanding of and ability to handle intelligently common language relationships.

Each test consists of eight paragraphs, and each paragraph is followed by a series of four questions. The questions preceded by the letter *A* are designed to determine whether the pupil appreciated the general significance of the paragraph. The questions preceded by the letter *B* are designed to test the pupils' ability to note details in the materials read. The questions preceded by the letter *C* are designed to determine the pupils' ability to understand the logical outcomes of the events described or the probable next steps taken by the characters involved. Finally,

questions preceded by the letter *D* test the pupils' understanding of certain vocabulary items which are found in readers designed for the grade in question or for the previous grade. Each question is arranged in four-response form. The four questions appear in varying order so that any particular "mind-set" is avoided. It is felt that this makes for a more natural reading situation.

The total score possible on each test is 32. This is evenly divided among the four different types of questions; thus a perfect score would permit 8 points each on the *A*, *B*, *C*, and *D* items.

The time limit for each test is fifteen minutes, which gives each pupil sufficient time to indicate his comprehension of the material. Only a very few slow readers will fail to finish the tasks in the time allowed. Thus the pupils' "power" in reading as contrasted with their ability to read rapidly is the chief factor measured. It is the opinion of the author of the tests that tests which are to be used frequently should not place undue emphasis on the speed factor, since to do so tends to create nervous tensions which are undesirable. For those who prefer a longer and more comprehensive test, such tests as the Nelson Silent Reading Test are recommended.

The materials are original. Care has been taken to make the subject matter of interest to the pupils in the grades involved. In trying out the material the authors have carefully considered pupil reactions to each item. The items that now appear in these tests are those to which most pupils react favorably.

Validity and Reliability

The validity of the tests is assured by the care with which

they have been constructed and tried out. The vocabulary conforms to that found in carefully written readers of recent publication. No correlations of scores with those made on other reading tests are as yet available. The author will be happy to have any information of this sort that may be obtained by users.

The reliability of the tests has been carefully checked and the coefficients of correlation between any two forms designed for the same grade range from .85 to .89. The probable errors are in each case ± .02. Additional information concerning both validity and reliability as well as norms will be made available as soon as possible.

Directions for Administering

Have the pupils clear their desks of all other materials. See that each pupil has at least one pencil. Two are preferable in order that the pupil's work may not be upset because of mishap to a pencil. Then say, "We are to have a little reading test that I am sure you will like. Let us read the directions together." Read the sample paragraph and questions asking for answers, and explain how the answers should be indicated — simply by crossing out the number of the correct response.

Sample:

Pal was the name of the snowy white dog, and what a pet of the family he was! Carol loved to dress him up especially when it was cold. Pal seemed to enjoy it quite as much as she did, for he would lie flat on his back with all four feet in the air while she slipped on the shoes that her doll had once worn. Then came the green sweater which Carol had worn when she was a baby and Pal was ready for a walk in the snow. Pal had a great fondness for chasing squirrels. One day as they started out, a squirrel was playing just outside the door. Pal was out of the house with a

bound, but the squirrel was quicker and was up a tree in an instant.

A. A good name for this story would be: (1) The Dog's Sweater; (2) The Squirrel in the Tree; (3) Carol's Pet, Pal; (4) Cold Weather..... 1 2 3 4

B. The dog's sweater was: (1) black; (2) white; (3) yellow; (4) green..... 1 2 3 4

C. What do you think Carol and Pal did next? (1) went for a walk; (2) went back to the house; (3) ate the squirrel; (4) forgot the baby. 1 2 3 4

D. Fondness means: (1) ease; (2) hate; (3) finding; (4) liking..... 1 2 3 4

When the questions have been answered, say, "If you find that you have made a mistake and marked the wrong answer, do not erase. Just draw a circle around the wrong answer and then mark the right one." Be sure the pupils understand this direction. It may be well to illustrate on the blackboard.

Directions for Computing Scores

Scores on the different parts of the test should be obtained separately. First, count all the correct answers on the *A* items and indicate that number; then, count the correct answers on the *B* items; next, those on the *C* items; and finally, those on the *D* items.

Norms

In view of the fact that these tests are designed for diagnostic as well as for rapid survey purposes, less attention has been paid at this time to the development of adequate norms. Such norms will be provided as users report their results. In the meantime, results from a limited number of

cases indicate that when the tests are used as suggested above, namely, Form A at the opening of the school year, Form B at mid-year, and Form C at the close of the year, pupils will average a score of 25 on each test. This score will be distributed as follows:

A — 6
B — 7
C — 6
D — 6

Application of the Results

Very low scores on any part of these tests indicate that the pupil needs some sort of remedial treatment in order to help him read more effectively. The kind of treatment needed varies greatly with the individual pupil and only a few suggestions are offered here. There are several volumes, however, which have for their purpose the treatment of poor reading habits or abilities.

A very low score on the *A* items indicates a deficiency in grasping the general significance of the materials read. This is frequently the result of "lazy" reading. The pupil has not formed the habit of demanding meaning for what he reads. Much of his silent reading is thoughtless mental word calling. Abundant materials such as may be found in newspapers, magazines, and easier stories of various types should be supplied, together with questions about the general content of the materials read. Articles in which irrelevant statements occur from time to time may also prove helpful if the pupil is asked to indicate those which do not contribute to the main thought of the story.

A very low score on the *B* items indicates that the

pupil is very inattentive to details and suggests that more attention should be given to having the pupil answer questions about the more minute details of the materials read. Of course, it is easily possible to overemphasize the importance of minor details and the teacher must guard against that, lest the reading rate become too slow and lest the general significance of the material be neglected.

A very low score in the *C* items indicates inability to predict probable outcomes or next steps. It can often be associated with failure to understand language relationships which demand the modification of one concept by another. Since ability to understand the general significance of a story is essential in predicting probable outcomes, success in the *A* items is usually, but not always, associated with success in the *C* items. Paragraphs devised or found by the teacher which are similar in nature to those in the tests will be helpful in bringing up this ability as will also the practice of stopping a pupil as he is reading through a selection and asking him to suggest the next part of the story or paragraph.

A very low score on the *D* items indicates, of course, a limited speaking and reading vocabulary. It suggests that the pupil has not the background of experience with which to make meaning. Pictures, oral conversations about different topics, dictionary drills, word games, picture-word matching exercises, and the like, often produce good results, but the pupil must understand that it is the reading of paragraphs and sentences which is sought rather than the mastery of isolated words. In some instances low mental ability is associated with limited vocabulary, but in almost every instance much improvement is shown by the pupil who reads widely. It is, of course, a truism that many of

the reading difficulties which a pupil may possess tend to disappear when he is motivated to read widely. On the other hand, a pupil who has extreme difficulty in some phase of reading can hardly be motivated to read widely.

FORM A

1. One afternoon as Alta was leaving her sixth grade classmates, she tripped and fell headlong down the first flight of stairs. With a dull thud her head struck the landing, and her body crumpled up and remained motionless. She was rushed to the hospital where for two days she lay half-conscious, making unintelligible sounds and refusing all food. A whole week of anxious hours passed before Miss Stone could announce to the class that Alta was well enough to have visitors at the regular visiting hours from four to five o'clock. Daisy suggested immediately that the class go together at three o'clock to pick violets for Alta, and it was so decided. As violets were plentiful in the low section of the park, in less than an hour the class filled the large bowl that Daisy had brought.

A. The pupils were: (1) thoughtful; (2) unkind; (3) helpless; (4) disobedient..... 1 2 3 4
D. Unintelligible sounds: (1) can't be heard; (2) are horrible; (3) are curses; (4) can't be understood..... 1 2 3 4
C. What did the children do next? (1) threw the violets away; (2) brought the violets to Alta; (3) fell downstairs; (4) refused their food.... 1 2 3 4
B. Alta was in grade: (1) two; (2) five; (3) six; (4) eight..... 1 2 3 4

2. Albert and Dave started on a long trip in a wobbly old car and with one hundred and fifty dollars to pay all

expenses. On the third day out, an unavoidable accident wrecked their transportation and left them with an unexpected problem. In no happy mood, they trudged back to a garage they had passed a short while before to find out what it would cost to repair the wreck. A little old man, with a wizened face, listened to their story. Without saying anything, he motioned for them to follow, climbed into a rattly old car and drove furiously out to the wreck. After looking carefully at the pile of twisted iron, he said, "It will cost more than it is worth to fix that, but I'll sell you this car of mine for fifty dollars." The boys held a quick conference and decided they could afford to accept the offer if they were careful not to spend too much for meals and lodging.

D. A wizened face is: (1) wrinkled; (2) crooked; (3) young; (4) boyish..... 1 2 3 4

C. After buying the car the boys: (1) continued their trip; (2) stayed at home; (3) stayed at a very expensive hotel; (4) left home..... 1 2 3 4

B. The price of the car was: (1) ten dollars; (2) fifty dollars; (3) one hundred and fifty dollars; (4) one hundred dollars..... 1 2 3 4

A. The boys needed a car because: (1) They each wanted one; (2) The first car was badly damaged; (3) The man wanted to sell it; (4) They could afford it..... 1 2 3 4

3. Each of the Walker boys, Tom and Lee, always let his mother know where he was going when he left the house. If she was absent, he wrote a note and put it in a certain place. One day when Lee was going away, he left a most unusual note for her. For some time, Tom and Lee had been experimenting with "invisible" ink, as they called it.

Letters or notes written with this ink had to be heated before they could be read. All of the note that Lee left, except these words, "Dear Mother," and "Lee," was written in invisible ink. When Mrs. Walker came home and found Lee's note, she was greatly perplexed. She was still puzzling over it, when Tom found her. "Lee left this paper," she said, "but he forgot to write the note. It doesn't tell me anything, and I can't find him anywhere." Tom laughed and held out his hand for the piece of paper. More perplexed than ever, Mrs. Walker gave it to him. With a good-natured grin, Tom walked to the range, turned on the gas, and held the paper above the flame.

B. How did Tom heat the paper? (1) over an electric light; (2) in the fireplace; (3) near the furnace; (4) over the gas..... 1 2 3 4

D. A perplexed person is: (1) carefree; (2) always present; (3) puzzled; (4) angry..... 1 2 3 4

A. What would be a good name for this story? (1) Tom Writes a Note; (2) Lee Uses Invisible Ink; (3) Lee Comes Home; (4) Tom Burns a Paper..... 1 2 3 4

C. What do you think Tom did next? (1) read Lee's note; (2) burned the paper; (3) tore up the paper; (4) said nothing to his mother... 1 2 3 4

4. Solemnly and yet hopefully, the young author had left his precious manuscript with the busy editor just three days ago. The editor had promised to read it and to decide within three days whether he would publish it. Beyond that he had given the author no encouragement. The three days of uncertainty had caused the author great anxiety. He felt sure that if his book were printed, it would have a great influence on conservation of forests, a

cause that was close to his heart. Today as he stood again before the editor's desk, he was eager, yet half-afraid, to hear what the editor thought of the manuscript. While he waited for the fateful words, he watched the editor's face closely. After a long silence that seemed almost endless to the nervous author, the editor looked up with a serious expression. Then his face brightened and as he rose, extending his hand, he said, "Congratulations, young man! You have written the best book of the century."

C. What do you think the editor did next? (1) agreed to publish the book; (2) threw the book into the fire; (3) scolded the author; (4) sent the author away..... 1 2 3 4

D. Conservation of trees is concerned with: (1) protecting them; (2) finding them; (3) selling lumber; (4) burning trees..... 1 2 3 4

A. How did the author feel about the editor's words? (1) sad; (2) dissatisfied; (3) happy; (4) hopeless..... 1 2 3 4

B. The author was interested in writing about: (1) soil; (2) prairies; (3) editors; (4) trees.... 1 2 3 4

5. One day while Amos Jones was doing his spring plowing with a new tractor, the plows caught on the root of a tree that he had recently cut down. In his excitement, Amos jumped down from his seat and rushed back to free the plow, but forgot to throw the tractor out of gear. Just as he stooped down to loosen the plows, the tractor broke loose from the plow and started off. As Amos jumped to his feet and started after it, his foot caught in a chain and threw him down. Before he could get loose, the tractor crashed through the pasture fence and headed toward the barn like some ferocious animal. Amos saw that he could not overtake it on foot before it crashed into the building.

Fortunately he found a horse grazing near-by. Springing on to the animal's back, he galloped after the runaway and a few seconds later he jumped into the seat of the wild machine.

A. A title for this story might be: (1) The Plow; (2) The Runaway Tractor; (3) Mr. Jones; (4) The Grazing Horse..... 1 2 3 4

C. What do you think Mr. Jones did next? (1) stopped the horse; (2) fixed the fence; (3) stopped the tractor; (4) went into the house 1 2 3 4

B. What time of year was it? (1) spring; (2) summer; (3) autumn; (4) winter..... 1 2 3 4

D. A ferocious animal is: (1) tame; (2) good-natured; (3) small; (4) fierce..... 1 2 3 4

6. Gold had been found in the vicinity only two days before. As Max leaned down over the shallow little stream that morning, he thought he saw some yellow particles lying in the sand below the swirling waters. He reached down into the cold water for a handful of the sand, but his hand held only a little and what he wanted most seemed to slip from its grasp. "I must get a pan," thought Max as he raced home in great excitement.

B. The story says the water was: (1) cold; (2) warm; (3) clean; (4) dirty..... 1 2 3 4

D. Particles are objects that are: (1) large; (2) small; (3) heavy; (4) cut in two..... 1 2 3 4

A. Max was excited because: (1) the water was cold; (2) he got wet; (3) he thought he had found gold; (4) he wanted some sand to play with..... 1 2 3 4

C. What do you think Max did with the pan? (1) floated it on the water; (2) threw it away; (3) washed his hands in it; (4) took up some sand from the stream..... 1 2 3 4

7. Andy was one of Aunt Sarah's favorite boys. Now he was a volunteer with George Washington and far away, as she thought. She prayed every day that the British would not harm him. Suddenly Andy stood in the doorway! "What are you doing here?" gasped Sarah. "Don't you know that the British are all around here?" "Yes," smiled Andy, "and they'll be here looking for me in less than five minutes. You will have to hide me at once." "Quick," cried Sarah, "into the attic! No, here!" she corrected as she opened a small trapdoor, pushed Andy into the opening, and shut him in. Setting a chair over the door, she sat down, covered the trapdoor with her skirts, which were 6 yards in circumference, and just in time resumed her knitting as if nothing had happened.

D. The circumference is the distance: (1) around; (2) across; (3) up and down; (4) between.... 1 2 3 4

C. What do you think happened next? (1) The Americans came; (2) Washington came; (3) The British came; (4) The trapdoor opened. 1 2 3 4

B. What was Sarah doing when Andy came? (1) sewing; (2) baking; (3) sweeping; (4) knitting. 1 2 3 4

A. A good title for this story would be: (1) Sarah Hides Her Andy; (2) George Washington; (3) Andy Goes to the Army; (4) The Attic... 1 2 3 4

8. The flock of geese was winging its way to the north in the usual V-shaped formation when a hunter with a powerful gun fired into them. One fine gander was so badly wounded that he could not continue flying. He and his mate descended to a large open field. The field provided shelter for the night, but next morning the pair with uncanny wisdom decided that their only hope of continued safety lay in a small island in the near-by river. There

they went and there they remained while the female tenderly cared for her wounded mate until late in the spring when hunters began to find their way to the island. Fortunately the wound was by this time practically healed.

A. A good title for this story would be: (1) A Flock of Geese; (2) The Little Island; (3) The River; (4) The Wounded Gander..... 1 2 3 4

B. How many nights did the two geese spend in the field? (1) one; (2) two; (3) three; (4) four 1 2 3 4

C. What do you think the geese did next? (1) flew back south; (2) continued north; (3) went back to the field; (4) stayed on the island... 1 2 3 4

D. Uncanny wisdom is: (1) foolish; (2) mysterious; (3) useless; (4) small..... 1 2 3 4

FORM B

1. While flying over a dangerous part of the Pacific, James Cooper and Edward Banks were forced down by a terrific storm. Fortunately they were near a small island which they made for with all possible speed. They reached it, but in landing, their plane was completely wrecked. Knowing that other flyers would be out to search for them, they decided to take turns at watching for planes and at keeping a fire burning so that they might start a smoke signal for any airplane that might be heard. On the fourth day, Edward, who had been vigilant every moment that he was awake, sighted a large plane flying just to the north. Immediately he piled fuel on the fire and sent up a huge smoke. A few moments later two excited young men were delighted to see the plane circle and then fly directly toward them.

B. On what day was the plane sighted? (1) the first; (2) the second; (3) the third; (4) the fourth..... 1 2 3 4

C. What do you think happened next? (1) The big plane came to the rescue; (2) The plane continued north; (3) The pilot paid no attention to them; (4) The ship sank..... 1 2 3 4

D. One who is vigilant is: (1) careless; (2) wicked; (3) strong; (4) watchful..... 1 2 3 4

A. The best of these titles for this story would be: (1) The Dangerous Pacific; (2) Starting a Fire; (3) Forced Down on an Island; (4) The Island 1 2 3 4

2. The sun was just sinking below the horizon when the eighteen boys arrived at the cabin. Though they had come long distances and from diverse directions, they all arrived at about the same time. All of them were very tired from their long journeys, but in spite of their fatigue, they decided to set their traps that evening, so while three of the best cooks remained to prepare supper, the others set out for the woods. After a good supper and a few minutes around the warm fire, all the boys were so sleepy and tired that nothing seemed to interest them.

C. What do you think the boys did next? (1) went to a dance; (2) went swimming; (3) sat up all night; (4) prepared for bed..... 1 2 3 4

D. Diverse means: (1) different; (2) plunging into water; (3) backward; (4) sports..... 1 2 3 4

A. A good title for this story would be: (1) The First Evening at Camp; (2) A Warm Fire; (3) A Morning Party; (4) The Long Journey 1 2 3 4

B. How many boys cooked supper? (1) one; (2) two; (3) three; (4) fifteen..... 1 2 3 4

3. Frank was out practicing for the cross-country run, in which, on Saturday, he hoped to win a big victory over the best runner Jackson School had had in many years. As he was running across a large field that lay behind the

cathedral, he stepped into a little hole, and fell, injuring his ankle severely. When he tried to rise, the pain in his ankle was so intense he knew that walking would be impossible. He tried to crawl but found that he could not endure even that effort. He was so far from the manor house that his call for help could not be heard there, but perhaps some one at the cathedral might hear him. With all his power he called several times. Soon a man appeared behind the building, listened, looked around in all directions, and then went into a basement door. Frank was discouraged, but how relieved he was a few moments later to see the kindly janitor of the cathedral coming towards him, wheeling an empty wheelbarrow.

D. A cathedral is a: (1) home; (2) church; (3) school; (4) tower..... 1 2 3 4

A. A good title for this story would be: (1) The Cathedral; (2) The Race; (3) Saturday's Luck; (4) The Accident..... 1 2 3 4

B. Frank fell because of a: (1) stick; (2) brick; (3) hole; (4) hill..... 1 2 3 4

C. What do you think happened next? (1) Frank walked home; (2) The janitor went by; (3) The janitor wheeled Frank home; (4) The race went on..... 1 2 3 4

4. Ivan's reputation for an enormous appetite was well-deserved. Only four years before, when the fair Rebecca had been one of his pupils, she was held in slight disdain by him because of her faltering speech and easy-going manners. But now that he had visited at her home and had eaten of her cooking, he held her in deepest reverence. No one in the country could match her as a cook. So it was with delightful thoughts that he awaited the special feast which

he knew she had prepared for tonight. How joyously he took his place at the right of the host when dinner was at length announced!

A. Which of these things do you think Ivan enjoyed most? (1) teaching; (2) sitting; (3) eating; (4) working..... 1 2 3 4
D. To hold in reverence means to: (1) dislike; (2) respect; (3) laugh at; (4) make fun of.... 1 2 3 4
C. What do you think Ivan did next? (1) went to sleep promptly; (2) danced a jig; (3) ate a huge meal; (4) left the table..... 1 2 3 4
B. How many years since Rebecca had been a pupil of Ivan? (1) one; (2) two; (3) three; (4) four..... 1 2 3 4

5. In spite of his weaknesses, the talkative Mr. Loos had some pleasing qualities. He seemed not to take himself very seriously, and, while not willing to consider himself a thief, he would sometimes confess that he had a very flexible conscience. He never dared stay long in one place because of the way he got his money. For example, when he went to see Mr. Wescott, he made Mr. Wescott believe that their fathers had been good friends. He then told a story about being robbed on his way to Chicago to visit friends and asked for a loan of ten dollars which the kind Mr. Wescott let him have. Later Mr. Wescott discovered that Mr. Loos came into Chicago from the opposite direction.

D. Flexible means: (1) easily changed; (2) stiff; (3) firm; (4) slow-moving..... 1 2 3 4
B. How much money did he borrow from Mr. Wescott? (1) one dollar; (2) two dollars; (3) three dollars; (4) ten dollars..... 1 2 3 4

C. When do you think Mr. Loos repaid Mr. Wescott? (1) the next day; (2) the next month; (3) never; (4) in about a year..... 1 2 3 4

A. What sort of a person was Mr. Loos? (1) honest; (2) respectable; (3) dishonest; (4) honorable..... 1 2 3 4

6. All day long the rain had been roaring down in torrents. The river was already so high that the Miller home was in danger and the water was rising rapidly. Just as black night settled down around the homestead, the stealthy flood began to trickle in under the door of the living room. After the small children were quietly put to bed, rugs and furniture, all that could be moved, were taken upstairs. In the flickering lamplight, the father and mother and older children watched the flood creep up the walls and stairs as the terrifying night dragged on. By midnight the water was four feet deep and still rising steadily. Would the flood carry the house away before daylight and help could come? There was nothing to do in the emergency but wait and hope that help would arrive before it was too late. At last dawn came, and just as the house seemed ready to float away, a boat with a rescue crew arrived.

B. How many feet of water were there in the house by midnight? (1) one; (2) two; (3) three; (4) four..... 1 2 3 4

A. How do you think the Millers felt before the boat came? (1) frightened; (2) happy; (3) thankful; (4) They didn't care..... 1 2 3 4

C. What do you think the Millers did next? (1) swam out of danger; (2) got into the boat; (3) went to bed; (4) stayed at home..... 1 2 3 4

D. In an emergency one feels that it is best to: (1) cry; (2) eat; (3) do something; (4) do nothing..... 1 2 3 4

7. For weeks the Arctic explorers had dwelt in this land of desolation and all went well until one morning they awoke to find themselves floating on a piece of ice which had broken away and was slowly making its way out into the vast expanse of ocean. With no boat, with supplies for only a few days, and with only a little oil for fuel, the need for help was urgent. The brave little crew was about to give up to despair when on the third day they sighted the sturdy little vessel which was coming to bring supplies to the expedition.

A. A good name for this story would be: (1) The Ice; (2) The Desert; (3) The Rescue; (4) The Despair..... 1 2 3 4

C. What do you think happened? (1) The ship sailed by; (2) The explorers died; (3) The ship sank; (4) The explorers were taken on ship.. 1 2 3 4

B. How many days did the explorers float on the ice? (1) one; (2) two; (3) three; (4) four..... 1 2 3 4

D. A land of desolation is mostly: (1) waste; (2) woods; (3) plowed fields; (4) cultivated..... 1 2 3 4

8. It was Perry's first football game. Being somewhat superstitious he had worn a rabbit's foot about his neck. But Perry's teammates knew that if he could get a good start down the field, he would need no rabbit's foot, for Perry was by far the swiftest runner on the field. It was a hard game with no score until in the third play of the second half Perry, carrying the ball, found that all his opponents had been blocked out and that a clear field lay ahead.

B. How much of the game remained? (1) almost all; (2) more than half; (3) less than half; (4) about three quarters..... 1 2 3 4

D. A common superstition is that: (1) lead is heavier than water; (2) thirteen is an unlucky number; (3) grass is green; (4) lemons are sour 1 2 3 4

C. What do you think Perry did next? (1) kicked the ball away; (2) threw the ball at his opponents; (3) ran to the goal line; (4) went home..... 1 2 3 4

A. A good name for this story would be: (1) The Rabbit's Foot; (2) Perry's First Game; (3) Half a Game; (4) How to Play Football..... 1 2 3 4

FORM C

1. The dashing European criminal had the effrontery to attempt the theft of the crown jewels of Borgia. He knew, of course, that the gems were openly displayed in a glass case behind glass doors, but either he did not know or did not care that the jewel room was protected by a clever signal arrangement. As he opened the doors of the jewel room, the signal device set off an alarm in two adjoining sound-proof rooms, an alarm the thief could not hear. Working rapidly, he soon had put the last of the jewels into his pockets and was ready to get away, but as he looked up, he found himself completely surrounded by an armed guard.

B. The jewels were kept in a case made of: (1) brass; (2) iron; (3) glass; (4) ivory..... 1 2 3 4

A. The criminal was trying to: (1) kill the princess; (2) steal the crown jewels; (3) murder the guard; (4) start the signal..... 1 2 3 4

D. Effrontery means: (1) cowardice; (2) wish; (3) ambition; (4) boldness..... 1 2 3 4

C. What do you think happened to the thief? (1) He ran away; (2) He jumped into his car; (3) He went to sleep; (4) He was taken prisoner..... 1 2 3 4

2. "As soon as I get this cotton picked for the Boss, I'm going to lie down for a whole week and never move an inch," drawled Rastus as he made his way slowly down the field, half-carrying, half-dragging the long bag of cotton. To this declaration his toiling wife beside him made no reply. She knew that it was almost impossible to make Rastus stir from the house, except at cotton-picking time, and even then it wasn't easy. She also knew that when he was at home, he could be as nearly inanimate as it is possible for any live human ever to be. So when the last cotton had been picked and Rastus shuffled off to his little two-room house, his hard-working wife knew what to expect of him.

C. What do you think Rastus did next? (1) plowed the fields; (2) picked more cotton; (3) hoed the garden; (4) took a long rest..... 1 2 3 4

A. Rastus was: (1) ambitious; (2) energetic; (3) lazy; (4) lively..... 1 2 3 4

D. Inanimate means: (1) unable; (2) capable; (3) silly; (4) lifeless..... 1 2 3 4

B. The number of rooms in his house was: (1) one; (2) two; (3) three; (4) four..... 1 2 3 4

3. "If cats have nine lives, I was responsible for ten deaths today," said the traveling salesman when he reached home. "Just a few miles out of the city I saw a little field mouse in the center of the pavement as I came around a curve. Apparently he had just become aware of a feline creature in the vicinity for he stood as if rooted

to the spot. Unfortunately, the cat was aware only of the nearness of her prey, for just as my car approached she dashed out after him. I swerved to avoid her, but it was too late. I am sure that one of my front wheels also ran over the hapless mouse."

A. A good title for this story would be: (1) Tragedy on the Highway; (2) A Narrow Escape; (3) The Happy Cat; (4) The Front Wheels.. 1 2 3 4
B. What was the mouse doing when the salesman saw him? (1) eating; (2) playing; (3) running; (4) standing still..... 1 2 3 4
C. What do you think happened to the cat? (1) It ran away; (2) It was killed; (3) It caught the mouse; (4) It chased another mouse..... 1 2 3 4
D. A feline creature is: (1) heavy; (2) criminal; (3) catlike; (4) stupid..... 1 2 3 4

4. Albert and Dave had never driven in the mountains before they started on their way to see the petrified trees. They had not gone far until they came to the top of a long slope down which a winding road led. "This would be a good place to coast and save some gasoline," said Dave who was driving. He turned off the motor and threw out the clutch. All went well for a while, but soon the car began going faster and faster. Dave put on the brakes, but they would not hold. Before he could think what else to do, the car ran off the road and turned over and over. The car was almost completely wrecked, but the boys miraculously escaped injury.

B. The story says the road was: (1) short; (2) straight; (3) winding; (4) rough..... 1 2 3 4
D. Petrified trees are: (1) wet and ugly; (2) evergreens; (3) small sturdy oaks; (4) turned to stone..... 1 2 3 4

C. What do you think the boys did next? (1) rode to the next town with a passing motorist; (2) went to the hospital; (3) kept on driving; (4) tipped over..... 1 2 3 4

A. Dave coasted: (1) up the mountain; (2) on the prairie; (3) at the wrong place; (4) in a valley..... 1 2 3 4

5. One day Paul was cultivating a small field with a one-horse cultivator. His faithful horse, Nell, was getting warm and tired, so Paul left her for a few minutes while he went across the field to the house for a drink of water. While he was gone, a wasp had the temerity to alight on Nell's back. As Nell did not like his presence, she swished her tail angrily to drive him away. The wasp, sensing a battle, stung poor Nell most painfully. With a snort and a squeal, Nell turned and went charging down the field before Paul realized what was happening. Calling "Whoa, Nell! Whoa, Nell!" he raced after her, but Nell wasn't to be stopped so easily. He was able to overtake her only after a half-mile chase.

D. Temerity means: (1) timidity; (2) rashness; (3) good sense; (4) trembling..... 1 2 3 4

B. What was Paul doing when the wasp came? (1) eating; (2) resting; (3) getting a drink; (4) sleeping..... 1 2 3 4

A. A good title for this story would be: (1) The Runaway; (2) Rest Period; (3) A Horse; (4) Paul..... 1 2 3 4

C. What do you think happened next? (1) Paul kept on running; (2) Nell kicked out the side of the barn; (3) Nell won the race; (4) Paul took Nell back to the field..... 1 2 3 4

6. Mr. Grant was a native of Iowa but in his early

twenties he had left the state to seek his fortune in a great eastern city. Life had not been easy for him at first, but little by little his work had received recognition and in later years he became wealthy and famous. During all this time he felt that anyone who could reside in the state of Iowa was indeed a privileged person. Especially in the spring of the year he longed for the green fields, the black soil, and the rolling prairies. Finally he came to feel that it was no longer necessary for him to live in the smoky city and that he could retire and enjoy life.

C. What do you think Mr. Grant did next? (1) bought a new home in the city; (2) moved to Iowa; (3) left the fields; (4) built a new factory..... 1 2 3 4

A. Mr. Grant liked best: (1) the bustle of the city; (2) the tall buildings; (3) the fields of Iowa; (4) the city clubs..... 1 2 3 4

B. At what time of year did Mr. Grant feel most that he wanted to leave the city? (1) spring; (2) summer; (3) autumn; (4) winter..... 1 2 3 4

D. A privileged person is: (1) wicked; (2) favored; (3) unfortunate; (4) foolish..... 1 2 3 4

7. As we were in a hurry to reach home after our trip to the city, we inquired about the "short-cut" road of which we had heard. "It's a good road," said the attendant at the filling station. "The first twenty-five miles are paved and the last eight miles are good graveled road." The rain was coming down in torrents and the road went through an isolated district, but all went well while we were on the pavement. As soon as the pavement came to an end, we came to a halt, for it was at once plain that the rest of the road was not graveled. The surface was mud

and we were sure that it would become steadily worse and impassable. There were no side roads where we had stopped, but by backing a few rods we came to a wide spot where the ground was firm.

A. A title for this story might be: (1) The Terrible Pavement; (2) Rain; (3) Side Roads; (4) Haste Makes Waste..... 1 2 3 4

D. An isolated place is: (1) full of people; (2) off by itself, (3) cold; (4) frozen..... 1 2 3 4

C. What do you think we did next? (1) drove back on the pavement; (2) kept on in the mud; (3) stopped in the rain; (4) stayed all night.. 1 2 3 4

B. How long was the "short-cut" road? (1) eight miles; (2) twenty-five miles; (3) thirty-three miles; (4) seventeen miles..... 1 2 3 4

8. Mr. Todd, who had always lived in the city, thought the life of a farmer would be ideal. So when he had saved enough money to buy half of a one hundred and sixty-acre farm, he moved out at once. He had had visions of spending long hours lying on the grass watching the clouds while his crops grew and his cows grazed contentedly in the meadow, but he found that farm life isn't like that. There was always work to be done. He blistered his hands repairing his fences. In sultry weather he had to cultivate his corn, make hay, or tend to his other crops, and when it was too dark for other work, there were the cows to milk and the horses to feed. After a few months, he welcomed with open arms the stranger who offered him the original purchase price for his farm.

B. How many acres of land did Mr. Todd buy? (1) forty; (2) eighty; (3) one hundred and sixty; (4) three hundred and twenty..... 1 2 3 4

C. What do you think Mr. Todd did next? (1) stayed on the farm; (2) sold his farm; (3) sent the stranger away; (4) bought another farm.. 1 2 3 4

D. Sultry weather is: (1) hot and moist; (2) hot and dry; (3) cloudy and rainy; (4) cool and damp..... 1 2 3 4

A. After he had farmed awhile, Mr. Todd was: (1) encouraged; (2) happy; (3) glad he left the city; (4) discouraged..... 1 2 3 4

IV. Organization of the Contents of This Manual

The remaining six chapters of this volume, corresponding to the six units in the text, contain the detailed suggestions for using the text with the children. The content of each chapter follows the same organization. The main items in this organization are as follows:

I. Statement of the fundamental purpose or theme
II. Suggestions for establishing readiness to read the unit
    A. A list of basal concepts or understandings to be developed by means of the oral discussion stimulated through the use of the pictures and appropriate questions
    B. A list of terms or oral vocabulary with which the pupils should become familiar during the discussion
    C. Suggested questions which the teacher might raise to stimulate the discussion leading to the construction of the basal concepts, together with minimum information needed for answering the questions
    D. Group activities suggested for optional use

III. Adaptability of selections in the unit for use in the development of important reading habits and skills
   A. Order of selections in the unit
   B. Classification of selections
IV. Teaching the individual selections in the unit
   A. Introducing the selection
   B. Introductory reading of the whole selection
   C. Suggestions for utilizing the selection in realizing the purpose of the unit
   D. Rereading the selection for specific purposes
V. Activities suggested for use in connection with the unit as a whole
VI. A test of basal concepts included in the unit

UNIT ONE

PROSE, POETRY, AND DRAMA

I. Purpose of the Unit

To help pupils realize that stories may be told in prose, in poetry, or in drama, and to understand some of the differences between prose, poetry, and drama, between history, realistic fiction, and fanciful fiction, and to stimulate an interest in reading widely in these fields.

II. Preparation for Reading the Unit

(The Reading-Readiness Approach)

A. Basal Concepts to be Developed

These concepts are developed through the use of the pictures and informal discussion before the unit is read.

1. What some of the differences are between prose, poetry, and drama
2. What a minstrel was
3. How important storytelling once was
4. What the medieval period was
5. How school children use drama
6. Czechoslovakia (location of)
7. Hungary (location of)
8. Dress of girls and women in Czechoslovakia and Hungary
9. What a totem is
10. What a totem pole is
11. How a totem pole is made
12. What the Antarctic Continent is like
13. How Antarctica was explored
14. What Eskimos make their homes of
15. How Eskimos get their food and clothing
16. What fiction is

B. Oral Vocabulary to be Used and Understood During the Discussion

medieval	Czechoslovakia	Siwash Indians
minstrel	costumes	igloo
troubadour	Hungary	seal
ballads	totem	furs
poems	totem pole	explorers
drama	Antarctica	fiction
prose	Eskimos	history
poetry		

C. Suggested Questions for Discussion

Each picture has a caption and a limited number of questions below it to be used in getting the discussion of that picture under way. The discussions will vary with different groups of children in accordance with the environmental interests that the children have. The following questions will supplement those accompanying the pictures, and may be used to develop the basal concepts and oral vocabulary listed above.

Introductory Discussion

1. What is the title of this unit? (*Prose, Poetry, and Drama.*) 2. Do you know what prose, poetry, and drama are? (They are different forms of expression that we use in telling or writing our stories or other things we wish to say. Show pupils that the stories which begin on pages 3, 19, and 33 in this unit are written in prose. Those on pages 55–69 are written in poetry. Those that begin on pages 71 and 90 are drama.) 3. What do you think are some of the differences between poetry, prose, and drama? (Pupils should be expected to understand only the most obvious differences. In prose the ideas are organized into paragraphs; in poetry they are organized in verses or stanzas. In poetry words that rhyme are sometimes used at the end of lines; this is not true in prose. In poetry a pattern of rhythm is usually followed; in prose this is not true. Drama is just a

1. *A drawing of a medieval minstrel.*

In olden times stories were often sung by wandering singers called minstrels or troubadours. The stories they sang were poems called ballads. There are other kinds of poems that tell stories.

"Hiawatha" is not a ballad but it tells a story. What other story-telling poems can you name?

G. A. Douglas, from Gendreau

2. *A scene from a drama.*

Are these children acting a story of modern times? How can you tell? Is the fireplace a real one or one that the children made?

Ewing Galloway

3. *A farm scene in Czechoslovakia.*

4. *Picking grapes in Hungary.*

Ewing Galloway

Czechoslovakia and Hungary are great farming countries. They are near neighbors. Can you find them on a map of Europe?

In what ways are the costumes of the people in the two countries alike? What interesting things can you learn from the pictures?

Ewing Galloway

5. *A present-day Siwash Indian of the Northwest, carving a totem pole.*

Totem poles were carved by primitive people to record important events. The totem was often the image of an animal, and was sometimes worshiped as the god of a tribe or family. Great ceremonies were held at the raising of a totem pole. What animal is the totem on this pole?

What stories have you read in which totem poles were mentioned? Where do you sometimes see totem poles? Would you like to carve one?

Wide World

6. *Along the coast of the Antarctic Continent.*

Ewing Galloway

7. *On the Antarctic Continent.*

From these pictures, what can you learn of the continent of Antarctica? Why don't people make their homes there? What hardships do people have exploring such a country? What adventures might they tell about?

Ewing Galloway

8. *An Eskimo family having dinner in their winter home, or igloo.*

9. *A summer igloo.*

Gendreau

From these pictures what can you learn about the way Eskimos get their food and clothing? In what kind of homes do they live in winter? In summer?

What other kinds of houses do Eskimos sometimes build?

What interesting tales have you heard or read about Eskimos?

special way of using poetry and prose. In drama the ideas are expressed by persons, or characters.) 4. Which form of telling stories is most frequently used? (Prose. Drama is used least.) 5. What good stories have you read? Were they written as prose, poetry, or drama? 6. Do you like prose, poetry, or drama best? Why?

7. What do you think the man in the picture is doing? (Telling a story.) 8. Do you think it is an interesting story? How do you know? 9. Do you like stories of things that really happened better than stories about things that never happened? Why? 10. Do you know what we call stories that tell about things that really happened? (History.) 11. Do you know what we call stories that tell about things that did not actually happen? (Fiction.) 12. Read page 2 aloud. The man in the center of the picture is telling a story. Do you think it is a funny story? Why? 13. Discuss all the questions on page 2. 14. Do you think storytellers were popular long ago? (Yes; perhaps more than they are today. In early times very few people could read. The only stories they got were told to them. For that reason, good storytellers were treated with great respect. But even now, when most people can read stories for themselves, we still like to *listen* to a well-told story.)

Picture No. 1. A drawing of a medieval minstrel.

1. What is the meaning of medieval? (The meaning varies; literally "middle-age." It refers to the thousand-year period, about A.D. 500 to A.D. 1500, known as The Middle Ages.) 2. What was a minstrel? (In the medieval period it was a person who told stories and played a musical instrument at the same time. Usually the stories were told in the form of poetry. Often the poems were sung, but they were much longer than most of our modern songs.) 3. Do you know another word that means about the same as minstrel? (Troubadour.) 4. Do you know the name given to the stories they sang? (Ballads.) 5. Is every poem that tells a story a ballad? (No. Ballads were composed to be sung. Many people believe that our old ballads were composed by minstrels long ago, and that ballads, like stories in

times of cave men, were memorized by a few people who heard them. Later, when the ballads were finally written, no one could justly claim to be the author, or composer, of a given ballad.)

6. Why is Hiawatha not a ballad? (It is too long, and it lacks qualities discussed under Question No. 5.) 7. What other storytelling poems can you name? (Pupils may give names of poems if they know them or tell the stories that the poems relate.) 8. To whom is the minstrel singing? (Probably to the people who live in a medieval nobleman's castle. He traveled from castle to castle to do this.)

Picture No. 2. A scene from a drama.

1. Are these children acting a story of modern times? How can you tell? (No. The spinning wheel and the costumes of the players show that a story of long ago is being acted.) 2. Is the fireplace a real one or one that the children made? (Not real. Probably children made it.) 3. Do you know an interesting drama that sixth-grade pupils can act? (This unit has one. A story that can easily be dramatized is also included. Watch for them as you read the unit. In many schools, children write plays themselves and then act them out.)

Picture No. 3. A farm scene in Czechoslovakia.

1. Locate Czechoslovakia and Hungary on a map of Europe. 2. What are the girls doing? (One girl is holding an empty bucket under the spout of a pump. The other girl is standing ready to start pumping.) 3. What can you learn from this picture about the way Czechoslovakian girls dress? (Note different things about their dress.) 4. How is the girl going to carry the two buckets of water? 5. Why does she do it this way? (Easier. Throws weight on her back.)

Picture No. 4. Picking grapes in Hungary.

1. In what ways are the costumes of the people in Czechoslovakia and Hungary alike? (Pupils compare dress. They should note similarities in skirts, bodices, and headdresses.) 2. What interesting things can you learn from the picture? (Pupils should note the appearance of the vineyard, abundance of

fruit, method of harvesting, and apparent pleasure with which the people work.) 3. Do you know what the grapes will be used for? (They will be eaten as fresh grapes, and they will be dried for later use. The juice will be made into wine.) 4. What color are the grapes? (White.) 5. What color is wine made from white grapes? (White. Red wine must be made from dark-colored grapes.)

Picture No. 5. A present-day Siwash Indian of the Northwest, carving a totem pole.

1. Why were totem poles carved by primitive people? (Read legend below the picture.) 2. What is a totem? (A totem is an animal, fish, or bird, or some object to which a savage or primitive person believed himself to be related. The members of all groups or families who had the same totem were considered to be closely related to each other. Often a certain totem became a symbol or sign of the tribe.) 3. Do you think civilized people have certain things that are used somewhat like totems? (Yes; they are called emblems.) 4. Do you know the emblems of some present-day nations? (The lion of Great Britain, the thistle of Scotland, and our American eagle are examples.) 5. What animals or plants are represented on the emblem of your state? 6. What animal is the totem on this pole? (An eagle. The totem animal is always at the top of a totem pole.)

7. Why are other animals often placed under the totem on a totem pole? (To show what animals a totem has power over.) 8. What animals are shown in the picture over which the eagle is supposed to have power? (The whale and the seal.) 9. What stories have you read in which totem poles were mentioned? 10. Where do you sometimes see totem poles? (Museums.) 11. Would you like to carve one yourself?

Pictures Nos. 6 and 7. Along the coast of the Antarctic Continent, and On the Antarctic Continent.

1. Where is Antarctica? (Surrounds the South Pole.) 2. What do you know about this continent? (Children may tell what they know. They should understand that Antarctica is much larger

than the United States. It includes about 5,000,000 square miles of ice-covered land. Only about 100 square miles are exposed. It has been estimated that there is enough ice in Antarctica to cover the whole world, oceans and land, 120 feet deep. The continent is higher above the sea than any other continent. It is the coldest continent on earth. The lowest temperatures in the warmest part have been found to fall to 77° F. below zero. The wind there blows harder than in any other place in the world. Its average speed is about 50 miles per hour, although it has been known to blow 100 miles per hour. No people make their homes on this continent. Whales and seals live in the sea. A few birds live on the land. One, the king penguin, grows to be more than four feet tall and weighs about 65 pounds.) 3. From these pictures, what can you learn of the continent of Antarctica? 4. Why don't people make their homes there? (Too cold.) 5. What hardships do people have exploring such a country? (Exposure to cold weather, illness that follows exposure, and starvation.) 6. How did explorers travel about? (On dog sleds. Rear Admiral Richard E. Byrd used an airplane also.) 7. What adventures might they tell about? (This unit will tell you of some of them.) 8. What other explorations do you know about that have been made in cold countries?

Pictures Nos. 8 and 9. An Eskimo family having dinner in their winter home, or igloo, and A summer igloo.

1. From these pictures, what can you learn about the way Eskimos get their food and clothing? (Notice the skins of animals. The skins are used for clothing. The flesh of many animals in the far north is suitable for food. Seals, walruses, whales, rabbits, polar bears, caribou, reindeer, and fish are the principal ones.) 2. In what kind of homes do Eskimos live in winter? (Picture No. 8 shows a winter home. Some winter homes have earthen and stone walls. The roofs are covered with dirt.) 3. What other kinds of houses do Eskimos sometimes build? (Houses of skins similar to the one shown in Picture No. 9, and houses of snow. Snow houses are built to be lived in for only a short time.)

4. What work do you see being done in the pictures? (In Picture No. 8, a seal is being dressed and food is being cooked. Picture No. 9 shows an Eskimo family cooking a meal out-of-doors.) 5. What do you suppose the white rabbit hanging on the wall in Picture No. 8 will be used for? (Flesh will be used for food and the skin for clothing.) 6. Where do you suppose the Eskimos obtained the guns and traps which you see hanging on the walls? (By trading with white men.) 7. What do Eskimos trade to white men? (Furs. Some can be seen hanging on the wall in the background of Picture No. 8.) 8. What interesting tales have you heard or read about Eskimos?

D. Suggested Group Activities for Optional Use

1. Read about explorations that have been made of Antarctica. Those directed by Rear Admiral Richard E. Byrd, Roald Amundsen, and Captain R. F. Scott are of particular interest.

2. Make a frieze for your room that will show the characteristic dress of people of different nations in Europe.

3. Set aside a class period when members of the class may read their favorite poems or ballads to the class.

4. A group of pupils may dramatize a familiar story for the class.

5. Individual pupils may carve small totem poles. An owl standing on the tail of a fish makes a simple, easily carved totem pole.

6. Make a list of stories in prose that are favorites of the class. Do the same for stories told by poetry, and stories told in drama.

III. Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills

A. Order of Selections in the Unit

1. A Dog Named Spike, pages 3–16
2. Strange Waters, pages 19–32
3. The Silver Bracelet, pages 33–52
4. Tales Told in Verse, pages 55–69

5. The King's Toothache, pages 71–82
6. Strings and Things, pages 83–87
7. Making Your Own Play, The Mail Goes Through, and How to Make Scenery and Costumes, pages 88–102

B. Classification of the Selections

The following chart indicates which selections are best suited for use in developing a given reading habit or skill:

Reading Habits and Skills	Selections						
	1	2	3	4	5	6	7
1. Getting the main ideas	x	x	x				
2. Reading for details	x	x	x			x	
3. Drawing conclusions	x	x	x				
4. Locating information	x	x	x				
5. Selecting material read	x	x	x			x	
6. Organizing ideas	x	x	x				
7. Remembering ideas	x	x	x				
8. Oral reading				x	x		x

IV. Teaching the Individual Selections

A DOG NAMED SPIKE

pages 3-16

A. Introducing the Story

This selection may be introduced by means of a brief informal discussion centering around the following questions:

1. Who has explored the country around the North Pole? 2. Who has explored the country near the South Pole? What did Admiral Byrd do? 3. What was Little America? 4. How

did Byrd and his men use their huskies or Eskimo dogs? How helpful were these dogs? (Perhaps this story will tell you.)

B. Introductory Reading of the Story

The selection should be read silently with or without a given purpose. A suitable purpose is: *How did Spike help the men to get back to Little America?*

The following questions may be used for discussion subsequent to the reading:

Page 3. Why were the men on the ships tense and eager?

Pages 4-5. 1. Why were the ships moving slowly? 2. How did Antarctica look to the men? 3. What is strange about the sun in Antarctica? 4. Why did the ships have to go back North? What had to be done before they could leave?

Page 7. 1. Why did the dogs behave as they did? 2. How do you think the other dogs felt about Spike?

Pages 8-9. 1. In what ways was Spike a better dog than the others? 2. What happened as soon as Byrd had found a good place for a camp?

Pages 10-11. 1. How did the dogs help with getting the supplies to the camp? 2. What things did the men do in building their camp? 3. What happened to Spike?

Pages 12-13. 1. When did the sunlight return? What did the men then get ready to do? 2. Why were the six men sent ahead of Byrd? What did Spike do? 3. How many supplies did the six men have to take on the sleds? 4. When did the dogs begin to give out?

Pages 14-16. 1. When did the situation become really bad? 2. What did the men decide would have to be done? Who was going to do it? 3. What saved the situation? How did the other dogs behave?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. Is this story written in prose or drama? Is it history or fiction? Why is it history? 2. What other stories about exploring have you read?

Other Activities: 1. Find other history stories and read them aloud to your classmates. 2. Find other stories of exploration at the North Pole or at the South Pole. Find other good stories about Byrd's expeditions. Tell your classmates about them and where they can get them.

D. Rereading the Story for Specific Purposes

The following material provides illustrative but not exhaustive exercises on certain important reading skills. Other exercises on the same skills can be built, using other parts of the selection.

Copies of the exercises can be made so that a pupil may write the answers immediately after each item, or they may be used with an oral procedure, supplemented by the blackboard. For many of the exercises, as the teacher reads the statements or questions in order, the pupil records his answers on a paper numbered to correspond with the numbers in each exercise. In organization exercises, as the teacher dictates each statement, the pupil writes it on a separate slip of paper and numbers it. Later he arranges the slips in the required sequence. Exercises, such as *Locating information*, may be used as class discussions.

1. *Getting the main ideas*

Which of these sentences are true?

1. Antarctica is a land covered with ice and snow. 2. The huskies did not need to help in unloading the ships. 3. The dogs did not like to leave the ships. 4. Spike looked like most huskies. 5. The dogs had to haul supplies from Little America to Byrd's camping place. 6. Spike led the dogs to the camping place. 7. The dogs' strength began to play out on the way from the camping place to Little America. 8. The men had to shoot several of the dogs. 9. Spike came from Little America to help. (True: 1, 5, 7, 9.)

2. *Reading for details* (Using pages 9–10)

1. How did Byrd send his message to the ships? 2. Who was second in command? 3. How far was the camping place from the ships? 4. On what were the supplies loaded? 5. How many men were in the party? 6. How many supplies were there? 7. Who hauled the supplies to the camp? 8. How were the sections of the house bolted together? 9. What was done to protect the walls from the wind? 10. Where were the hangars built?

3. *Drawing conclusions*

1. Why did Byrd's party not depend upon crops in the Antarctic to supply them with food? 2. During what season of ours does the sun not set at the South Pole? 3. Is the temperature ever higher in Antarctica than it is anywhere in our country? How do you know? 4. Was Spike an intelligent dog? How do you know? 5. For about how many months does the period of no sunshine last in Antarctica? How do you know? (March — October.)

4. *Locating information*

Here is part of the index of a book:

> Byrd, R. E., at Little America, 9–12; at the South Pole, 12–14; birth, 4; early boyhood, 5–6; education, 8; expeditions, 9–16; honors awarded to, 17.

On what pages would you look in the book to find answers to these questions?

1. What explorations has Byrd made? 2. When and where was Byrd born? 3. What dangers did his expedition to the South Pole face? 4. Where did Byrd go to school? 5. What rewards has Byrd received for his achievements?

5. *Selecting material read*

Find the paragraphs or sentences that give answers to these questions:

1. What kind of country is Antarctica? 2. In what ways was

Spike an unusual dog? 3. How did the dogs behave on the trip back to Little America? 4. What loading and unloading of supplies had to be done? 5. What was done in building the camp?

6. *Organizing ideas*

Arrange these events in the order that they happened in the story:

1. Spike became ill. 2. Spike found the men on their way back to Little America. 3. The ships landed on the coast of Antarctica. 4. Byrd found a place to build a camp. 5. The ships were unloaded. 6. The camp was built. 7. Spike led the dogs back to camp. 8. Six men started out ahead of Byrd. (Correct order: 3, 4, 5, 6, 1, 8, 2, 7.)

7. *Remembering ideas*

Suppose you wanted to tell someone what work the dogs on Byrd's expedition did. Find the paragraphs that tell ideas you would need to remember for this purpose.

STRANGE WATERS

pages 19-32

A. Introducing the Story

Raise and discuss the following questions:

1. Look at the picture on page 18. It shows part of a farm on the plains of Hungary. What is there about the house that looks different from farm houses in our country? 2. What do you think is growing in the garden? 3. What has the little girl been doing? 4. What things do you think boys and girls could do on a farm in Hungary? (Perhaps this story will tell you.)

B. Introductory Reading of the Story

The story should be read silently. A suitable purpose for this reading is: *How did Kate get into trouble?*

The following questions are suggested for discussion:

Page 19. What things had Kate found on the farm to interest her?

Pages 20-21. 1. What was wrong with the weather? 2. What was happening to the flowers and the crops? How did Father feel about the situation? 3. How did Jancsi and Kate offer to help him?

Pages 22-23. What happened before Mother could tell her story?

Pages 24-25. 1. How hard did it rain? How did the family feel about it? 2. What did the rain do to the plants?

Pages 25-26. 1. Where did Father take Jancsi and Kate? 2. Where did Jancsi and Kate stay while Father looked at the fields?

Pages 27-28. 1. What did Jancsi and Kate decide to do? 2. What did Jancsi warn Kate about? What happened to her? 3. What did he decide would be the best way to help her?

Pages 30-31. 1. How did Jancsi save Kate? 2. What did Geza and Kate seem to be disturbed about? 3. What did Father do when Kate told him what had happened?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. Is this story prose, poetry, or drama? Do you think it is history or fiction? What kind of fiction is it? 2. What other stories have you read about life in Hungary? How could you go about finding some?

Other Activities: Find other stories about farm life in foreign countries. Read them to your classmates if you think the stories will interest them. Look for both history stories and fiction.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. There was nothing on the ranch to interest Kate. 2. The plants and flowers were suffering from lack of water. 3. Whether or not the ranch had a successful year depended upon the coming of rain. 4. The family was disappointed when the storm came. 5. Kate and Jancsi went to the river with their mother. 6. The children spent part of the day riding back and forth on the ferry.

7. Kate got caught in the rapid current of the river. 8. Jancsi saved her by picking her up in a rowboat. 9. Jancsi's father punished both of the children. (True: 2, 3, 6, 7.)

2. *Reading for details* (Using pages 19–21)

1. What did Jancsi and his father do all day? 2. How had the ducklings changed? 3. What vegetables did Mother get from Kate's garden? 4. What animals played in the cornfield? 5. Why did Mother and Father call the rabbits pests? 6. How thick were the walls of the ranch house? 7. Why did Mother give up trying to water her flowers? 8. What grains did Father raise on the ranch? 9. What did Father think would happen if rain did not come? 10. What money did Kate and Jancsi offer to give to Father?

3. *Drawing conclusions*

1. Was fruit grown on the ranch? How do you know? 2. Was Kate a better swimmer than she thought she was? How do you know? 3. Did the rain save the crops on the farm? How do you know? 4. Do you think Jancsi had what we call "presence of mind"? What makes you think so? 5. Was it because Geza was afraid he would lose his job that he did not want Father to know what had happened? How do you know?

4. *Locating information*

Here is part of the index of a book:

> Hungary, area, 42; chief cities, 43; form of government, 46; industries, 44–45; political history, 47–50; population, 42; products, 51–53; topography, 42.

On what pages in the book would you look to find answers to these questions?

1. In what wars had Hungary engaged? 2. What mountains are in Hungary? 3. What are the chief farm crops? 4. What seaports does Hungary have? 5. Is Hungary as large now as it once was?

5. *Selecting material read*

Find paragraphs that answer these questions:

1. What was happening to the land because of lack of rain? 2. What was the weather like before the storm? 3. What birds and fowls were around the farm? 4. What clothing did Jancsi wear? 5. What kind of man was Father?

6. *Organizing ideas*

Arrange these events in the order that they happened in the story:

1. Father and the children went to the river. 2. The storm came. 3. Kate was caught in the current. 4. Kate told Father what had happened. 5. It rained for three days. 6. Jancsi and his horse saved Kate. 7. Mother gave up trying to water her flowers. (Correct order: 7, 2, 5, 1, 3, 6, 4.)

7. *Remembering ideas*

Suppose you wanted to tell someone the ways in which a farm in Hungary is like a farm in our country. Find the ideas you would need to remember for this purpose.

THE SILVER BRACELET

pages 33-52

A. Introducing the Story

Raise and discuss these questions:

1. What story have you read that told how a captive escaped from Indians? How did the captive escape? 2. Do you know where the Indians called Eskimos live? (The Haida Indians, the Eskimos of this story, are of the Pacific Coast tribes. The Haidas live on the Queen Charlotte Islands, west of British Columbia.) 3. In years gone by what do you think they would do with a captive white man? How do you think he could escape from them? (This story will tell you how one white man did it.)

B. Introductory Reading of the Story

The reading of this story should be divided into two parts. The first part ends on page 44. This material should be read silently. A suitable purpose is: *What plan did Maada make for helping the white man to escape?* Use the glossary for pronunciation and meaning of strange words.

The following questions may be used subsequent to the reading:

Page 33. What festival were the Eskimos getting ready to celebrate?

Pages 34-35. 1. What preparations had been made for the festival? 2. What special thing were the Eskimos planning to do the next day? 3. Why was Maada so concerned about it? How had she found the white man?

Pages 38-39. 1. How had Maada smuggled a knife to the prisoner? 2. What plan did he have for escaping from the prison? 3. What was the hardest part of this plan for Maada to carry out?

Pages 40-41. 1. Who was Shim? What kind of person was he? 2. Why did Maada think that he would be a good person to help her carry out her plan? 3. Who was Toona?

Pages 42-43. 1. What plan did Maada have for Shim to help her? 2. What did Maada tell Shim to get him to help her?

The second part of the story begins on page 44. A suitable purpose for reading this material silently is: *How did the white slave show his gratitude to Maada?*

The following questions may be used for discussion:

Pages 44-45. What things did Maada do that evening?

Pages 46-47. 1. Why do you think Maada spent some time mingling with the people? 2. When did she drop the rope down the smoke hole?

Pages 48-49. 1. What did Maada tell the white man before he left? 2. What had happened because the bear was killed?

Pages 50-52. 1. How did the Eskimos explain the prisoner's escape. 2. Why did the ship land at the village a year later? 3. What did the captain give to Maada?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. What kind of story do you call this? Why? 2. What other stories about Eskimos have you read? Where did you get them?

Other activities: 1. Find other stories that are realistic fiction. Read them aloud to your classmates. 2. Find out how the Eskimos live in different parts of the North.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. The white man had been made a slave of the Eskimos. 2. Maada felt as she did because she had helped to capture the white man. 3. The plan for the escape was made by the white man. 4. Shim helped Maada in carrying out her plan. 5. The Eskimos planned to sacrifice the white man at their festival. 6. Maada's plan did not succeed fully. (True: 1, 2, 4, 5.)

2. *Reading for details* (Using pages 37–39)

1. What had the people done while the workmen made the totem pole? 2. How long had the white slave been imprisoned? 3. What were the shamans doing to prepare the slave for sacrifice? 4. Why were they trying to cast out evil spirits? 5. Who carried food to the prisoner? 6. Why was she allowed to do it? 7. How had the knife been hidden? 8. Of what was the long rope made? 9. Where had Maada hid it? 10. What other things had she hidden?

3. *Drawing conclusions*

1. Were the Eskimos superstitious? How do you know? 2. Was Shim the best person to let the bear loose? Why? 3. Was it a good thing that the slave did not escape by going

out of the door? Why? 4. Why do you think Shim was so willing to let the bear loose? 5. Why was it a good idea to let the bear loose?

4. *Locating information*

Which words would you look for in the index of a book to find answers to these questions?

1. What do Eskimos use for food? 2. How do Eskimos catch seals and bears? 3. For what purposes is blubber used? 4. What are some of the strange customs of Eskimos? 5. What types of houses do Eskimos build?

5. *Selecting material read*

Find the paragraphs that give answers to these questions:

1. What preparations were made for the potlatch? 2. What did Maada do to throw suspicion away from herself? 3. What things did Maada do to help the prisoner escape? 4. What kind of animal was Toona? 5. What happened when the bear was killed?

6. *Organizing ideas*

Arrange these events in the order that they happened in the story:

1. The white man was captured. 2. Maada got the canoe and supplies together. 3. Maada received bracelets from the captain of the ship. 4. The Eskimos prepared for the Potlatch. 5. The white man escaped. 6. The white man served as a slave. 7. Maada got Shim to help her. 8. The bear was let loose. (Correct order; 1, 6, 4, 7, 2, 8, 5, 3.)

7. *Remembering ideas*

Suppose you wanted to tell someone the things that the Eskimos did that showed they were a superstitious people. Find the ideas that you would need to remember for this purpose.

TALES TOLD IN VERSE

pages 55-69

A. Introducing the Stories

The teacher or a pupil who reads well at sight may read page 55 aloud. Allow pupils to discuss this material if they wish to do so.

The teacher may introduce the poems as a group by making some statement such as the following: "These stories that we are going to read are poems that many sixth-grade boys and girls have learned to like. Perhaps you will like them too. They tell different kinds of stories." Most of them are funny. Let's try reading them aloud.

B. Introductory Reading of the Stories

There are seven poems in the selection. All of them may be read in one lesson, or they may be distributed over two or more lessons. This will depend upon whether the children's reactions are of such a nature as to involve considerable discussion and perhaps the collection and reading of other poems.

None of the seven poems are to be studied. They are not to be analyzed in terms of structure or style, and they are not to be assigned for memorization. They are to be read and enjoyed during the reading.

All of the poems should be read aloud. This may be done by the teacher and by individual pupils. The children may wish to read some of them in concert. After a given poem is read, give pupils opportunity to raise questions and to make comments. This activity, however, is to be an informal group discussion, not a quizzing or testing performance, and it should center around the remarks that the pupils make. The point is to help the pupils use their own

experiences in reconstructing the experiences presented in the poems.

Pupils who wish to memorize any of the poems should be allowed to do so.

C. Using the Stories to Realize the Purpose of the Unit

Discussion: What kind of stories do these poems tell? Are they history? Are they fiction? Do the poems tell realistic or fanciful stories?

Other Activity: Encourage pupils to bring favorite poems to school. Set aside a time when these can be read aloud to the class.

THE KING'S TOOTHACHE

pages 71-82

A. Introducing the Story

This selection may be introduced by the teacher making some statement such as the following: "This story is written as a drama or a play. It is really a very funny story. It is about a king who lived in medieval times. Like many people, he had a toothache. Something very modern happened to him. What do you suppose it was?"

B. Introductory Reading of the Story

Pupils should read the play silently first. At the close of the reading, an informal discussion may be held provided the children have comments to make or questions to ask.

The play should then be read aloud. Different children selected by the class may read the different parts.

C. Using the Story to Realize the Purpose of the Unit

Discussion: Is the story told in this drama a history story? Is it fiction? Is it a realistic story or a fanciful story? How do you know?

Other Activity: Encourage pupils to find other dramas or plays they would enjoy reading aloud as a group.

STRINGS AND THINGS
pages 83-87

A. Introducing the Story

Raise and discuss the following questions:

1. How many of you have ever seen a marionette show? (Sometimes it is called a Punch and Judy show or a puppet show.) 2. What plays did you see? 3. How do you suppose the marionettes were made? How do you suppose they are made to act? 4. The play you have just read is a marionette show. Do you think you could make marionettes and give the play? (Perhaps this story will help you.)

B. Introductory Reading of the Story

This selection should be read silently. A suitable purpose is: *How are marionettes made and used?*

The following questions may be used for discussion:

Page 83. What kinds of stories are good for puppet plays?

Pages 84-85. 1. Why does it not need to cost much to get ready for a puppet show? 2. How should the parts of a puppet be joined together? 3. Should the parts be stiff or flexible? (Have pupil look up the meaning of flexible in glossary or dictionary, if necessary.)

Pages 86-87. 1. Of what should the body be made? 2. What controls should be used?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. What things will you need to do to get ready for a puppet show besides making the marionettes? 2. How can you divide up the work that needs to be done?

Other Activities: 1. Make plans for giving a puppet show. Build the stage, and make the puppets and other materials.

2. Give the play "The King's Toothache." 3. Find other marionette plays and give them.

D. Rereading the Story for Specific Purposes

1. *Reading for details.* (Using pages 85–87)

1. Of what should the parts of the body of a puppet be made? 2. What two things can be used to join the parts of the body together? 3. How should the knee joint work? 4. How is the elbow joint made? 5. What other joints can be made to work like the elbow? 6. Of what should the thigh joints be made? 7. In what three ways can the ankle joint be made? 8. Of what is the neck joint made? 9. To what are the controls fastened?

2. *Selecting material read*

Find the paragraphs that answer these questions:

1. What kinds of stories make good puppet shows? 2. What joints have to be made in making a puppet? 3. What materials are needed in making a puppet? 4. Do all puppets have to be controlled by the use of strings? 5. What will teach you how to make a puppet do things?

MAKING YOUR OWN PLAY
THE MAIL GOES THROUGH
HOW TO MAKE SCENERY AND COSTUMES

pages 88-102

A. Introducing the Story

Have pupils read pages 88–89 silently. Then discuss the following questions:

1. If you were reading a story from which you wanted to make a play, what are some of the things you would need to do with the story? (Make a list of the things on the blackboard.) 2. What else would you need to decide before you would be ready to give the play? (Make a list of these things on the blackboard.) 3. What is the title of the story we are going to read? (*The Mail Goes Through.*) What do you suppose it is about?

B. Introductory Reading of the Story

The story should be read silently. A suitable purpose for silent reading is: *How did Carl save John Carter's claim?*

The following questions may be discussed subsequent to the reading:

Pages 90-91. 1. Where did the Suttons live? 2. What adventure did Carl have? 3. Who stopped at Sutton's cabin?

Pages 92-93. 1. Why was Jim Buckley anxious to see Mr. Sutton? 2. Why did Carl think he could carry the mail? Why did Jim finally decide that Carl could go?

Pages 94-95. 1. What was the matter with Harry? Why was he wounded? 2. Why was Mary upset about Harry's illness?

Pages 96-97. 1. How did Carl feel when he reached Placerville? 2. How did Bill and Harry feel about Carl going on to Sacramento? 3. What did Mary tell Carl before he left?

Pages 98-99. 1. What men were talking in John Carter's shack? 2. What had happened to John Carter? Why?

Pages 100-101. 1. How did Carl fool Joe? 2. How was Joe captured?

C. Rereading the Story for Specific Purposes

Read the story silently as many times as you need to decide upon answers to the following questions:

1. What parts of this story could you leave out if you were making a play from it? 2. How many scenes would there be in the play? What would these scenes be? 3. How many characters would you have in the play? What would they be? 4. What paragraphs in the story should be changed into dialogue? 5. What objects would you need to use in the play?

D. Using the Story to Realize the Purpose of the Unit

1. Plan to give the play, *The Mail Goes Through.* Use the answers you decided upon for the above questions. Choose one or more pupils to write the play, putting in dialogue where it belongs. Select classmates for the different characters, and have

them memorize the parts. Read page 102 to find out how to make your scenery. You may need to read pages 88–89 again to get help in getting ready to give the play.

2. Pupils may find other plays which they think the class might like to give.

3. Perhaps some pupils can write original plays for the class to give.

V. Suggested Activities for the Unit as a Whole

1. Give pupils plenty of opportunity to read aloud to their classmates stories and poems which they think are good and which they believe their classmates would like to hear.

2. Encourage pupils to write original poems, short stories, and plays of their own. These may be read aloud to the class. The best of them may be printed in the school newspaper.

3. Give pupils opportunity to introduce new and interesting stories and books they find to their classmates. In connection with this activity, pupils may construct a list of standards for introducing good books to other readers. These items may start the list: (1) Tell who wrote the book; (2) Tell the name of the book; (3) Tell a little about the story; (4) Tell whether or not you like the book, and why; (5) Tell where one can get the book. Pupils may make suggestions for improving their book introductions in the light of the list of standards they construct.

4. Pupils may write brief reviews of interesting books, stories, poems, and plays they read individually, both in and out of school, on 3×5 or 4×6 cards. These may be filed in a box and used by any child who wants to find what other children think of a story he may be curious about. The following illustrates a suitable form for the cards:

Kent, Louise Andrews, *He Went With Marco Polo*

This book tells of the adventures of Tonio Tumba, who went with Marco Polo on his famous journey to the Far East more than 650 years ago. It is one

of the best books I have read. It can be obtained at the public library.

Reported by Harry Peters

5. Pupils may wish to organize a literature club. Meetings of this club could be used for the telling and reading of good stories, and for the introduction of new books.

6. At times the language period in the daily program may be used for the telling of stories. These stories may be reproductions of stories read or heard, or they may be original. In connection with this work, encourage pupils to set up standards for good story-telling. The following is the beginning of a list of such standards: (1) Choose a story that you think your classmates will enjoy. (2) Know your story well. (3) Tell things in the order that they happened. (4) Speak loud enough for everyone to hear. When the storytelling is finished, give pupils opportunity to make suggestions for improving their storytelling in the light of standards previously set up.

VI. A Written Test on Basal Concepts

1. What was a minstrel?
2. Why was storytelling once very important?
3. What is a history story?
4. What is fiction?
5. What is the difference between realistic fiction and fanciful fiction?
6. Name one story in this unit that was a history story.
7. Name one story that was realistic fiction.
8. What story was fanciful fiction?
9. What is a totem pole?
10. Why is Antarctica hard to explore?
11. Write two or three sentences that tell what kind of people Eskimos are.
12. What are some of the things that a farmer raises on the plains of Hungary?
13. Write one way in which poetry is different from prose.
14. Write one way in which drama is different from prose.

UNIT TWO

WORK OF SKILLFUL HANDS

I. Purpose of the Unit

To give pupils an understanding of how certain handicrafts have developed, and to help them develop a strong appreciation of the skill, patience, and care that goes into the construction of artistic materials.

II. Preparation for Reading the Unit

(*The Reading-Readiness Approach*)

A. Basal Concepts to be Developed

These concepts are developed through the use of the pictures and informal discussion before the unit is read.

1. How stained-glass windows are made
2. Tools used by scribes in Middle Ages
3. Writing materials used in Middle Ages
4. How weaving is done on a hand loom
5. How primitive weaving is done
6. What spinning is
7. What handicrafts are
8. How baskets are woven by hand
9. How Indians do bead work
10. How Indians make pottery
11. Early pottery designs
12. How a modern potter works
13. What a potter's wheel is
14. How an old-fashioned potter worked
15. How fine china is made

B. Oral Vocabulary to be Used and Understood During the Discussion

handicrafts	warp	bead work
stained-glass windows	woof	potter's wheel
Chartres Cathedral	loom	kaolin
scribe	treadle	porcelain

wax tablets
stylus
parchment
soot
gum arabic
decorated
papyrus
quipu (kē′pōō *or* kwip′ōō)
shuttle
lace pillow
spinning wheel
raffia
design
basketry
pottery
China clay
kiln
feldspar
quartz
base
mold

C. Suggested Questions for Discussion

Introductory Discussion

1. What is the title of this unit? (*Work of Skillful Hands.*) 2. What do you think the term "skillful hands" means? (People who do artistic work with their hands and who do it well.) 3. What name is given to work that requires skillful hands? (Handicrafts.) 4. What are some of the handicrafts? (Weaving, making pottery, making books, basket making, bead work, leather work, metal work. Pupils may name others.) 5. What work have you tried to do that required the skillful use of the hands? 6. What work have you seen other people do that required a great deal of skill? 7. What handicrafts are the boys and girls in the picture trying to learn about? (Pottery making and weaving. Pupils may name others.)

8. Do you know how this famous stained-glass window on page 104 was made? (Each piece of glass you see in the window was cut with a pointed hot iron. Hot iron will make cool glass crack. As each piece of glass was cut it was fitted into patterns which you see in the picture. Thin strips of lead were used to hold the pieces of glass in place.) 9. What do you know about the famous Chartres Cathedral? (It is located in Chartres, France, fifty-five miles southwest of Paris. It was rebuilt in the thirteenth century. It has 125 stained-glass windows. In these windows there are almost 4000 figures. More than a half million different pieces of glass were used in making the windows.) 10. Do you know why this is called the Noah window? (The window shows scenes supposedly from Noah's life. The lower center picture shows animals going into the ark as Noah watches.)

Ewing Galloway

Putting pieces of colored glass together to make a stained-glass window.

2. *A finished window.*

Ewing Galloway

Many famous stained-glass windows in old churches in Europe were made in the Middle Ages, more than five hundred years ago.

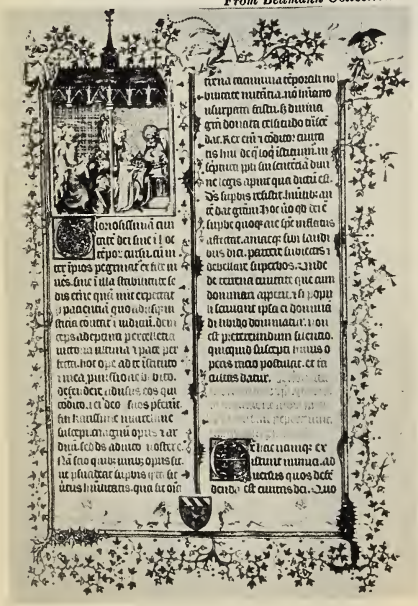
Would you call the makers of stained glass windows skilled craftsmen? Why?

From Bettmann Collection

3. *A bookmaker, or scribe, of the Middle Ages.*

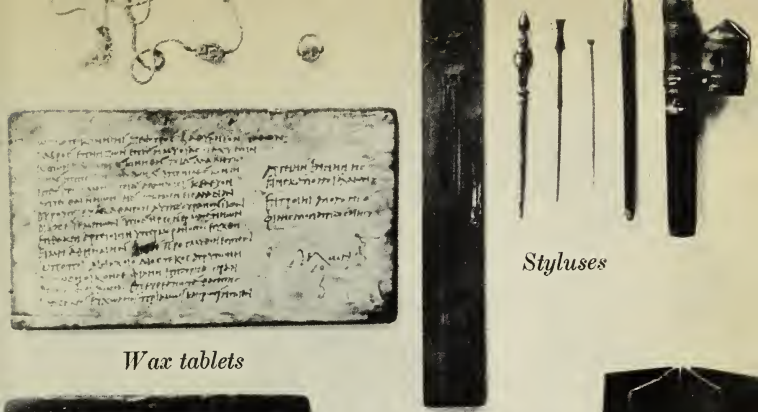
4. *A page from a Bible of the Middle Ages.*

From Bettmann Collection



By looking at the words and lines of the Bible, would you think that it was printed by hand? Why?

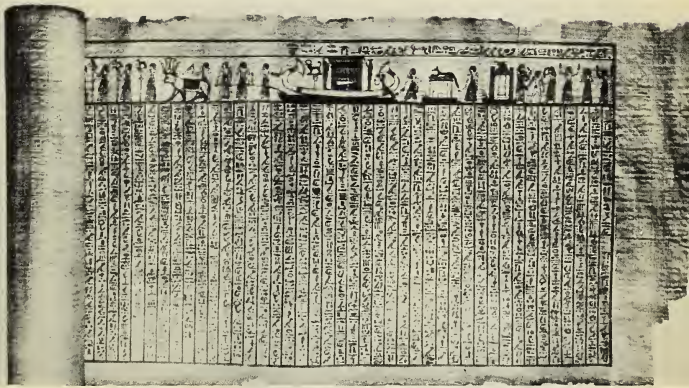
The scribes, who were usually monks, printed and bound their books by hand. They often illuminated (decorated) the pages in bright colors. In what ways do the pages of these old books differ from those which you read?



Styluses

Wax tablets

Ink pots



From Bettmann Collection

5. *Ancient writing materials.*

6. *A papyrus roll, a volume of the Egyptian "Book of the Dead."*

How can we tell that some of the ancient bookmakers were skilled craftsmen?

Ewing Galloway

7. *Weaving a small rug on a hand loom.*

8. *African weaver.*

Ewing Galloway

Which of the two looms in these pictures would you call the more primitive? Why? Do the weavers appear to be skillful workers? What makes you think so? Can you tell how hand weaving is done?

Tell about the different kinds of material from which cloth is now woven.

Piz

9–10. *Learning the handicrafts of spinning and weaving in a Swedish school.*

What are some of the most common handicrafts? Why is it a good thing for everyone to learn a handicraft?

Ewing Galloway

11. *Skilled basket weavers.*

12. *Skilled bead workers.*

Ewing Galloway

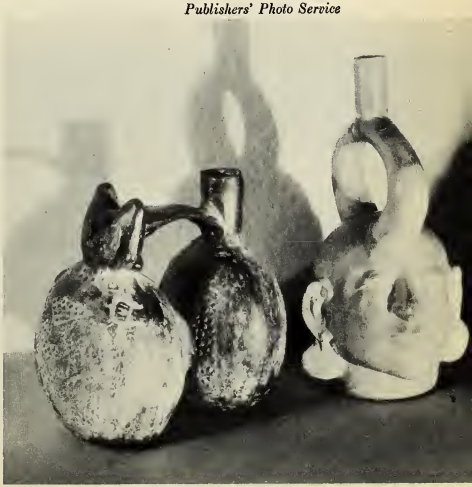
Many Indians are noted for their skill in weaving and pottery making. What kinds of woven articles do you see in the pictures? What materials are used in making each kind? In what ways are these handicrafts useful as well as artistic? What other Indian handicrafts do you know?

Ewing Galloway

13. *Pueblo Indians making pottery today.*

14. *Indian pottery more than 2000 years old.*

Publishers' Photo Service



Making pottery is one of the oldest crafts. Can you tell why?

What is the most common use of pottery? In what way is pottery made beautiful as well as useful? What designs have you seen on pottery? How many different uses of pottery can you name?

Ewing Galloway

15. *Molding a vase on a modern potter's wheel.*

16. *An old-fashioned potter's wheel.*

Ewing Galloway

The wheel in picture 15 is turned by a motor. How is the wheel in picture 16 turned?

Why must the vase be kept turning while the potter is shaping it? Which potter seems to be making the simplest vase? Do these two potters seem interested in their work?

Ewing Galloway

17. *Taking fine china, or porcelain, plates out of the kiln, or oven.*

How are the plates protected while they are being baked in the kiln? Can you find the containers in the picture?

Fine porcelain is decorated, baked, and dipped into a tub of liquid glaze and baked again. Glazing makes the outside hard like glass. Why are dishes glazed?

18. *Glazing decorated pottery.*

Ewing Galloway

Ewing Galloway

19. *Danish artists decorating fine porcelain.*

20. *Decorated pottery vase.*

H. Armstrong Roberts

In what way are the Danish artists decorating the porcelain? How did the Indian artist decorate the pottery vase?

How do the plants, flowers, and pictures help the artists in decorating dishes? What designs have you seen on china or porcelain dishes? On pottery? Are many of them flower designs?

Pictures Nos. 1 and 2. Putting pieces of colored glass together to make a stained-glass window, and A finished window.

1. Look at the different objects shown in the finished window. How do you suppose the objects were colored differently? (First, many sheets of glass were made. Among them were all the different colors that the window maker would use. From the sheets of glass tiny pieces of the color desired were cut and fitted into the patterns.) 2. What are the men in the picture doing? (They are fitting pieces of glass into a pattern.) 3. Would you call the makers of stained-glass windows skilled craftsmen? (Yes. The selecting of the best colors to work with, the cutting of each piece of glass into the correct shape, and placing the pieces together to make a beautiful picture requires great skill and patience.) 4. Have you ever examined closely a stained-glass window? What pictures did it show? 5. How long ago were many of the famous glass windows in Europe made? (Read legend below Picture No. 1.)

Pictures Nos. 3 and 4. A bookmaker, or scribe, of the Middle Ages, and A page from a Bible of the Middle Ages.

1. By looking at the words and lines of the Bible, would you think that it was printed by hand? Why? 2. Do you know what was used for paper in these old Bibles? (Parchment. It was made from the skins of sheep, goats, and calves. First, the skins were washed. Then, the hair was removed and the skin was scraped. Later, it was powdered with chalk and smoothed with pumice stone. At last, it was stretched, dried, and cut into pieces the size of a page.) 3. What do you think the scribes used for ink? (Soot, water, and gum arabic, a glue-like material. The gum arabic made the soot stick to the parchment.) 4. What did they use for pens? (Some scribes used pointed wooden sticks. Others used goose quills. The feathers had to be sharpened to make a fine point.) 5. Who printed most of the Bibles in the Middle Ages? (Read legend below Picture No. 1.)

6. Who were monks? (Men who lived together in a building, or buildings, usually far from cities. The monks spent much of their time thinking about religion. They had very few dealings

with people who were not monks. Being interested in religion, the monks made a great many copies of the Bible.) 7. Look at Picture No. 4. Do you think the decorations and printing on this page show that the monks were skillful craftsmen? Why? 8. In what ways do the pages of these old books differ from those you read? (Pupils should note style of letters and arrangement of text in columns and decorations, and then compare them with corresponding features of this book. The language in the old book is Latin.)

Picture No. 5. Ancient writing materials.

1. Can you tell what each of the things shown in this picture was used for? (Pupils should be given opportunity to tell what they know. Upper left — knotted cords or ropes were used as a form of writing long ago. The manner in which the knots were tied and the number of knots used indicated certain ideas. Knotted ropes used in ancient Peru are sometimes called quipus. Unfortunately there is no one alive today who can read a quipu. Upper right — styluses are sharp, pointed writing tools. They were used to write upon wax tablets. The Romans had a sharp pointed dagger which was known as a stylus. Lower left, center, and lower right — wax tablets. Melted wax was poured over polished boards. When it had hardened, a message could be written in it with a stylus. Later the wax could be scraped off and a new coat of wax put upon the board. Lower right — ink pots. These pots held ink made of soot, water, and gum arabic. The ink was used for writing on parchment and papyrus.)

Picture No. 6. A papyrus roll, a volume of the Egyptian "Book of the Dead."

1. Does this volume have pages? Why? (No. Egyptians long ago made their books on long strips, or rolls, of paper. Instead of turning pages, the reader unrolled the book. The Roman people called such a roll a *volumen*, which in our language was changed to *volume*. A large ancient book often consisted of several rolls or volumes.) 2. Do you know what papyrus is? (It was the name given a water plant which grows in Egypt.

Many centuries ago Egyptians learned to make a kind of paper from the papyrus plant. Papyrus was also the name which was given to the paper made from the papyrus plant.) 3. How can we tell that some of the ancient bookmakers were skilled craftsmen? (In museums today there are many ancient books. The books are still in good condition and the writing is clear. One needs only to examine these books to be convinced that ancient bookmakers were skilled craftsmen.)

Picture No. 7. Weaving a small rug on a hand loom.

1. Do you understand how weaving is done? (In weaving cloth two sets of threads are used. One set runs lengthwise of the cloth. These threads are called *warp* or *warp threads*. The other set of threads run crosswise of the cloth. These threads are known as the *woof* or *woof threads*. The warp threads in the picture are white. The woof threads are dark-colored. The woof thread is wound on the shuttle which the girl holds in her right hand. The loom is the machine that holds the warp threads and woven cloth. You can see that the warp threads are separated into upper and lower groups to form a V-shaped opening between the groups. This opening is used for passing the shuttle of woof thread across the warp. After each passing of the shuttle, the weaver moves a treadle. This causes the lower group and upper group of warp threads to exchange positions. Each time that the groups of warp threads exchange positions, the shuttle is passed from one edge of the cloth through the V-shaped opening between the warp threads to the other edge. Each time that the shuttle is passed, the cloth increases in length by just a little more than the thickness of a woof thread.)

2. Do you understand how patterns may be woven in cloth? (Simple patterns can easily be made by using shuttles wound with threads of different colors.) 3. Look at the pattern in the piece of cloth hanging on the wall beyond the girl's head. Is this a simple pattern? (No. Patterns like this one can be made only on looms that separate warp threads into many different groups.)

Picture No. 8. African weaver.

1. Do you see the warp threads on this loom? (Extreme left.)

2. What color is the thread on the shuttles? (White.) 3. Which of the two looms in these pictures would you call more primitive? Why? 4. Do the weavers appear to be skillful workers? What makes you think so? 5. Can you tell how hand weaving is done? 6. What are the different kinds of material from which cloth is now woven? (Cotton, wool, silk, linen, and rayon are commonly used. Asbestos, glass, and metals are sometimes used.)

Pictures Nos. 9 and 10. Learning the handicrafts of spinning and weaving in a Swedish school.

1. Which girl is learning to spin? (The girl on the right side of Picture No. 9.) Do you understand how spinning is done on a spinning wheel like the one shown in the picture? (The large wheel is turned by a treadle. As it turns, a band, or belt, on the large wheel causes a spindle to turn. As the spindle turns, it twists the fibers of wool into thread.) 2. Which girls are learning to weave? (In Picture No. 9, except the girl who is spinning, the girls who are seated are learning to weave.) 3. What kind of weaving are they learning to do? (The girl in the foreground is learning to weave on a small loom. Compare the arrangement of warp threads on this small loom with the arrangement on the loom shown in Picture No. 7.) 4. Can you see the treadle on the small loom? (Near the girl's left foot.) 5. What is the treadle used for? (When the treadle is pressed by the weaver's foot, the warp threads are separated into two groups so that the shuttle can be passed between them.) 6. What kind of weaving is the other girl in this picture learning to do? (She is learning to make lace.)

7. What is the machine at which she is working called? (A lace pillow.) 8. What is the girl in Picture No. 10 doing? (She is learning to weave on a large loom.) 9. Do you see some woven cloth in the picture? (Look on the table, and on the wall in the background.) 10. What are some of the most common handicrafts? (Weaving, spinning, leather, metal, and wood crafts, knitting, and needle work.) 11. Why is it a good thing for everyone to learn a handicraft? (In learning a handicraft one develops useful skills and finds out many worthwhile things about the

materials he works with. One may use a handicraft to earn a living, to make things for the home, and for fun.)

Picture No. 11. Skilled basket weavers.

1. Do you know that basket making is one of the oldest handicrafts? (Baskets have been found which are known to be more than 6000 years old.) 2. What materials are commonly used in basket making? (Twigs, canes, reeds, grass, wood splits, straw, leaves, and plant stems.) 3. Are looms needed for basket weaving? (Looms are not used. Baskets are made almost entirely by hand.) 4. What method of weaving are the girls using? (The coil method. Follow with your eyes the pattern of the coil from the center of the bottom in the basket that the girl on the right is holding.) 5. How do you suppose the girls form the patterns of figures in the baskets? (By using colored grass or raffia.) 6. What kind of woven articles do you see in the picture? (Baskets and mats.)

Picture No. 12. Skilled bead workers.

1. How is bead work done? (Usually it is a kind of weaving. Woven bead work has warp and woof threads. The beads are usually strung on the woof threads. Instead of a shuttle, a needle is used to carry the woof threads through the warp. Commonly a bead is placed so that a warp thread comes on each side of it.) 2. How are patterns in bead work formed? (Beads of different colors are used.) 3. What kind of bead work do you see in the picture? (A belt, head bands, and necklaces. The girls are wearing these articles.) 4. In what way are the handicrafts shown on this page useful as well as artistic? 5. What other Indian handicrafts do you know? (Pupils may tell about the ones they know — leather work, pottery making, light metal work, sewing, and simple wood carving.)

Picture No. 13. Pueblo Indians making pottery today.

1. What kind of clay do the Indians use for making pottery? (The best pottery clay is made of very fine particles of weathered granite.) 2. How do they prepare the clay for making pottery?

(All particles of leaves and roots and pebbles are first removed. The clay is then passed through a very fine sieve to remove the coarse particles of clay. The very fine clay is then mixed with water to form a stiff mud. It is then set aside for a few days to allow every particle of the clay to become soaked with water. At last the clay is formed into pottery. Some Indian pottery is dried only in the sun and some of it is baked in fire. Fire-baked pottery is much harder and stronger than sun-dried pottery.) 3. How do the Indians make designs on their pottery? (The designs are painted on it.) 4. Can you see the clay mud that the Indians are using to make pottery? (In front of the woman on the right.) 5. Do you see a pan of clay that has not been made into mud? (Extreme right side of the picture.) 6. Do you think these Indians are skillful pottery makers? Why?

Picture No. 14. Indian pottery more than 2000 years old.

1. Can you tell why pottery making is a very old handicraft? Articles of pottery have been found that are more than 6000 years old. Material was easy to get and easy to shape. It is not easily destroyed by water, fire, wind, or small animals. Useful in cooking and storing food and easy to keep fairly clean.) 2. What is the most common use of pottery? (For holding liquids; dishes and vases. Pupils may name other uses.) 3. In what way is pottery made beautiful as well as useful? (The beauty of pottery is due to color, pattern, and form.) 4. What designs have you seen on pottery? 5. Do you like the form of the pottery shown in the picture? Why? 6. Do you think the makers of these articles were skillful workers? Why? 7. How many different uses of pottery can you name? (Pupils make list.)

Picture No. 15. Molding a vase on a modern potter's wheel.

1. What kind of clay do modern potters use? (Kaolin. This type of clay is commonly called china clay. It is made by the weathering of rocks known as feldspar. The thin particles that make up kaolin are exceedingly fine — so fine that 5000 of them lying side by side would cover not more than one inch of space.) 2. How is the clay prepared for use? (Fine, clean clay is mixed

with large quantities of water. Only enough clay is used to make the water slightly muddy. The muddy water is then allowed to stand undisturbed in tanks for a few hours. During this time the coarser particles of clay sink to the bottom, and the finer particles remain floating in the water. The muddy water containing the finer particles of clay is then drained in a second tank leaving the coarse particles behind. The muddy water then stands for several days. During this time the clay particles sink to the bottom of the tank and the water becomes clear. The clear water is then drained away and the clay mud at the bottom of the tank is collected for use in making pottery. When the clay is put upon the potter's wheel to be made into articles, it is in the form of stiff mud.)

3. How is the potter's wheel in this picture turned? (Read legend below the picture.) 4. How did the potter begin work on this vase? (A ball of clay mud was placed on the center of the wheel. The wheel was then set in motion. As it turned, the potter worked the mud into the form of a vase as it turned around.) 5. Can pottery be shaped without using a potter's wheel? Yes. But the wheel helps the potter work faster, and it makes easier the work of forming perfectly round vases with walls of uniform thickness.) 6. Do you see a ball of clay mud in the picture? (Look on the bench at the left of the potter.) 7. What is in the bowl beside the ball of clay? (Bits of dried clay which are no longer useful.)

Picture No. 16. An old-fashioned potter's wheel.

1. How is the wheel in this picture turned? (By the potter's foot.) 2. Why must the vase be kept turning while the potter is shaping it? (To make the vase round and smooth.) 3. Which potter seems to be making the simplest vase? (The potter in Picture No. 15.) 4. Do the potters in Pictures Nos. 15 and 16 seem interested in their work? 5. Do you see vases in Picture No. 16 which have been set aside to dry? (Look on the table behind the potter.) 6. How is pottery of different colors made? (Substances are mixed with the clay which give it color as the clay is baked.)

Picture No. 17. Taking fine china, or porcelain, plates out of the kiln, or oven.

1. What is porcelain? (Kaolin mixed with quartz and feldspar is used for making porcelain.) 2. How were the plates made? (Some plates are made on a potter's wheel. In modern factories they are usually molded.) 3. What is a kiln? (It is a place where various articles are baked. In a porcelain kiln the dry articles are fired, that is, baked, several hours at 1700° F. The articles are then hard and almost water-tight.) 4. How are the plates protected while they are being baked in the kiln? (Each plate is put into a sagger or clay box. The plates and saggers are then put into the kiln. The saggers cause the plates to be evenly heated.) 5. Can you find the containers, or saggers, in the picture? (Look on the table and on left and right sides of the picture.)

Picture No. 18. Glazing decorated pottery.

1. How is porcelain decorated? (There are many different ways of decorating pottery. Usually a dye which is not affected by heat is applied before the pottery is baked. Sometimes the dye is mixed with powdered glass and brushed on after the pottery has been baked. Pottery is sometimes painted after it has been glazed.) 2. How is pottery glazed? (After the first baking, the pottery is dipped into a liquid called glaze. Glaze for porcelain is made of kaolin, powdered quartz, and feldspar. These, you will notice, are the same substances of which porcelain clay is made, except that in glaze more quartz and feldspar are used than in porcelain clay. After pottery is dipped in glaze, it is baked again. This time the heat reaches about 2500°. The heating period for porcelain usually lasts about 30 hours.) 3. Why are dishes glazed? (Read legend by the side of the picture. Glazing makes the dishes water-tight.) 4. Do you see other articles in the picture which are ready to be dipped into the glaze? (Look on table beside the craftsman.) 5. Do you think porcelain makers are skilled craftsmen? Why?

Picture No. 19. Danish artists decorating fine porcelain.

1. In what way are the Danish artists decorating the porcelain?

(Danish artists found out that porcelain can be decorated after it is glazed. They mix dye with powdered glass and paint on the glazed porcelain the desired designs. The porcelain is again baked for a few minutes at 1400°. The design is then melted into the glaze.) 2. How do the flowers and pictures help artists in decorating the dishes? (The artists copy flowers, leaves, and scenes from pictures on the porcelain. Many people believe that the Royal Copenhagen Porcelain Manufactory at Copenhagen, Denmark, now makes the finest porcelain in the world.) 3. What designs have you seen or can you find on china or porcelain dishes? On pottery? Are many of them flower designs?

Picture No. 20. Decorating a pottery vase.

1. How did the Indian artist decorate the pottery vase? (A design made of clay was raised above the pottery wall.) 2. What other way of decorating pottery did Indians use that you know about? (Give pupils opportunity to recall what they learned in connection with Picture No. 13.) 3. Does this artist seem to be interested in his work? Why? 4. Do you know how different handicrafts have developed through the centuries? (This unit will tell you.)

D. Suggested Group Activities for Optional Use

1. Ravel a small piece of ordinary cloth and identify the warp and woof threads. Notice as the cloth is raveled how the threads are woven together.

2. Examine a piece of cloth that has a woven design and trace the courses of warp and woof threads to see how the designs were made. Tablecloths, bedspreads, or covers, and tapestries usually have woven designs.

3. Visit a plant, if convenient, where brick, tile, pottery, or porcelain is made, and find out what materials are used and what processes they are put through to produce finished articles.

4. Visit a museum, if convenient, and examine the pottery on display.

5. Find out how beads are made.

6. Obtain some smooth willow twigs and wheat straw and try making small baskets.

7. Find out how our alphabet developed. Use the encyclopedia.

III. Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills

A. Order of the Selections in the Unit

1. Gilds of Craftworkers, and Gilds in the Middle Ages, pages 105–117

2. Plans for a Play, and From Apprentice to Journeyman, pages 119–130

3. Makers of Books in Ancient Times, The Invention of Paper in China, and Famous Old Libraries, pages 131–150

4. Swedish Weavers Long Ago and Now, pages 152–158

5. Master Potters in China, and For the Emperor of China, pages 161–178

B. Classification of Selections

The following chart indicates which selections are best suited for use in developing a given reading habit or skill:

Reading Habits and Skills	Selections				
	1	2	3	4	5
1. Getting the main ideas	x		x	x	x
2. Reading for details	x		x	x	x
3. Drawing conclusions	x		x	x	x
4. Locating information	x		x	x	x
5. Selecting material read	x		x	x	x
6. Organizing ideas	x		x	x	
7. Remembering ideas	x		x	x	x
8. Oral reading		x			x

IV. Teaching the Individual Selections

GILDS OF CRAFTWORKERS
GILDS IN THE MIDDLE AGES

pages 105-117

A. Introducing the Stories

Raise and discuss the following questions:

1. How many of you know what labor unions are? Why were they organized? 2. Do you know whether workmen had labor unions about the time Columbus discovered America? (No.) Did the workmen have any organizations at all? What were they? (Gilds.) 3. What were the gilds? How did they work? Why did they disappear? (Perhaps these stories will tell you.)

B. Introductory Reading of the Stories

These selections should be read silently. A suitable purpose is: *What was the nature of the medieval gilds?*

The following questions may be used for discussion:

Page 105. 1. Why did Lena think it would be a good idea to study gilds? 2. What did Bruce suggest?

Pages 106-107. 1. What three groups did the class form? What three things was each group to do? 2. What things did Miss Strong suggest the children should find out about gilds?

Pages 108-111. 1. How many gilds were there in the Middle Ages? Who belonged to them? 2. What were some of the rules the gilds had?

Pages 112-114. 1. What did the gilds do for the churches? How did they help the towns? 2. Why did the gilds disappear?

Pages 115-117. In what ways were the gilds different from our trade unions?

C. Using the Stories to Realize the Purpose of the Unit

Discussion: 1. Why do you think gilds were organized? What good did they do the workmen? How did they help people who bought things that members of the gild made? 2. Do you think

workmen in the days of the gilds did their work more carefully than workmen work today? What makes you think so?

Other Activities: 1. Find out more about gilds. Use the encyclopedia and histories. 2. Choose one handicraft that the pupils in Miss Strong's class did not choose. Find out how people worked at this craft. Tell your class what you find.

D. Rereading the Stories for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. In the Middle Ages there were not more than thirty gilds. 2. The gilds had rules to govern the quality of their work. 3. The rules of the gilds said that no workman could work at night. 4. The rules said that all gild members had to pay the same price for materials. 5. The rules said that each gild could make only certain things. 6. The gilds helped the church. 7. The gilds helped to make schools. 8. The invention of machinery made the gilds larger. 9. The gilds disappeared because the kings ordered them to disband. 10. The gilds were just like our labor unions. (True: 2, 4, 5, 6, 7.)

2. *Reading for details* (Using pages 113–115)

1. When did people begin to invent machines? 2. How did working with the machines compare with working with hand tools? 3. What did many of the gildsmen have to do when the machines were invented? 4. Why did craftsmen begin to disobey the rules of the gilds? 5. Why did it become harder to be a master craftsman? 6. Where did the members of a gild live? 7. Where do the members of a trade union live now? 8. Why are trade unions stronger than the gilds were? 9. How many women belonged to the gilds? 10. How are employers treated differently by trade unions than they were by the gilds?

3. *Drawing conclusions*

1. Do you think that if means of transportation and communication in the Middle Ages had been as good as they are now

the gild would have had a better chance of surviving? Why? 2. Do you think a workman's pride in the things he made began to grow less with the coming of the machines? Why? 3. Do you think trade unions now work for the same things that the gilds worked for? How do you know? 4. Do you think a trade union now has more members than a gild did? Why? 5. Did the gilds have some of the same rules that trade unions have today? Which ones?

4. *Locating information*

Here is part of the index of a book:

> Gilds, effect upon labor conditions, 63–64; effect upon prices, 64; internal troubles, 68–70; origin, 60–61; period of activity, 65–67; purposes, 62; relation to nobility, 63; where found, 61.

On what pages would you look to find answers to these questions:

1. Were the gilds controlled by the nobles? 2. Why did the gilds disappear? 3. Where were gilds organized? 4. Did gilds secure higher wages for their members? 5. During what years were gilds prominent?

5. *Selecting material read*

Find ideas that answer these questions:

1. Why were the gilds organized? 2. How did the invention of machinery affect the gilds? 3. In what ways did the gilds control working conditions? 4. Why did the gilds fail to survive? 5. What did the gilds have to do with festivals?

6. *Organizing ideas*

Pages 109–112 tell about rules the gilds had. Pupils may fill in this skeleton outline:

RULES OF THE GILDS

I. Work was inspected
II. Working time was limited
  A.
  B.
  C.
  D.
III.
  A.
  B.
IV. Members co-operated
  A.
  B.
  C.
V.

7. *Remembering ideas*

Suppose you wanted to tell someone what you consider to be the helpful or valuable things about gilds. Find ideas you would need to remember for this purpose.

PLANS FOR A PLAY
FROM APPRENTICE TO JOURNEYMAN
pages 119-130

A. Introducing the Story

Pupils may read page 119 silently. Then raise and discuss the following questions:

1. What do you think an apprentice was? 2. How do you think he learned to be a journeyman? Do you know what a journeyman was? What kind of examination do you think he had to take? (Perhaps this story will tell you.)

B. Introductory Reading of the Story

Pupils should read the story silently. It may then be read aloud, with pupils chosen by their classmates reading the different parts.

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. What was a journeyman? 2. Why was it bet-

ter to be a master craftsman than a journeyman? 3. How old were boys when they became apprentices? What kind of work did they do? How long did it take them to become journeymen? 4. How did a gild protect apprentices? 5. What kind of examinations did apprentices take to become journeymen?

Other Activities: 1. Have your class give this play. 2. Find out enough about the work of another kind of gild to rewrite and give the same kind of play about it.

MAKERS OF BOOKS IN ANCIENT TIMES
THE INVENTION OF PAPER IN CHINA
FAMOUS OLD LIBRARIES

pages 131-150

A. Introducing the Stories

These selections may be introduced by the teacher making some statement such as the following: "You will remember that the boys and girls in Miss Strong's classes divided themselves into three groups to study different gilds. One of the groups chose to study the bookmakers' gild. What do you suppose they discovered of the way books were made before printing machines were used? What do you think they found out about the invention of paper?" (Perhaps these stories will answer these questions.)

B. Introductory Reading of the Stories

The reading of these selections should be done in two parts. The first part ends on page 143. This material should be read silently. A suitable purpose is: *What materials did people use for writing before paper was invented?*

The following questions may be used for discussion:

Pages 132-133. 1. What were some of the things that the children had gathered together on the table? 2. What did the

people who lived long ago in southern Russia use when they sent a message to the Persians? What did the message say? 3. Why did people stop sending real objects to tell a message? What did they use instead?

Pages 134-135. 1. What message did the Indian picture writing tell? 2. How did the Indians use combs to make a record?

Pages 136-137. 1. How did the Indians use beads in making a message? 2. How did ancient Servians keep an account of credit in buying goods? 3. What materials were used to write on before paper was invented?

Pages 138-139. 1. From what was papyrus made? 2. How did the Egyptians make it?

Pages 140-141. 1. Where was papyrus made in large quantities? 2. How did the Egyptians make their ink? How could they erase it? 3. What did these people use for pens?

Pages 142-143. How were wax tablets made? Why were they less expensive than papyrus?

The second part of the reading begins on page 144. A suitable purpose for silent reading of this material is: *How did better materials for writing come into existence?*

The following questions may be used for discussion:

Pages 144-145. 1. When did the Chinese learn to make paper? Who brought this secret to the western world? 2. When did paper begin to take the place of other materials for writing? 3. How did the Chinese make paper? 4. In what ways did the children try to make paper?

Pages 146-148. 1. Why was King Assurbanipal's library a strange one? 2. How were the clay tablets made? 3. Why did the King of Egypt decree that no papyrus should be sold to people of Asia Minor? 4. How did the King of Pergamas meet this situation? 5. On what were most of the books of the Middle Ages written?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. In what ways do you think the invention of

writing helped people to live together more happily and contentedly? 2. In what ways are our modern materials better for writing than wax tablets, papyrus, and parchment were?

Other Activities: 1. Find out how our writing paper is made today. Write to the best-known paper factories for pictures and pamphlets. 2. Try making paper out of old linen rags. 3. Try writing messages by pictures. See if your classmates can understand what you write.

D. Rereading the Stories for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. People once sent messages by using real objects. 2. People once sent messages by using picture writing. 3. The first records were made on papyrus. 4. Papyrus was made from a plant. 5. The wax tablets were used by the Greeks and Romans. 6. The first writing tools used ink. 7. Paper-making was invented by the Arabs in China. 8. The first paper was made from the skins of animals. 9. Parchment was invented in Egypt. 10. Parchment is still used in writing. (True: 1, 2, 4, 5, 10.)

2. *Reading for details* (Using pages 144–145)

1. What kind of craftsmen have the Chinese been? 2. How long after the Chinese invented paper-making did the rest of the world find out about it? 3. Who discovered how the Chinese made paper? 4. How did they happen to discover it? 5. Where did the Arabs establish factories? 6. What three materials did the Chinese use in making paper? 7. What was the frame that they used made of? 8. Why did they put the sheets under presses? 9. When did the Chinese quit using this method?

3. *Drawing conclusions*

1. Do you think the invention of paper has helped to improve means of communication? How? 2. Did the Chinese contribute more to the making of books than the Egyptians did? How do you know? 3. Do you think it was a good thing that

paper was invented? Why? 4. What kind of stories or thoughts do you think the monks wrote on parchment? What makes you think so? 5. Do you think that the ink we use today is better than the ink the Egyptians used? Why?

4. *Locating information*

What words would you look for in the index of a book to find answers to these questions:

1. Did people have an oral language before they had a written language? 2. For what purposes is parchment used now? 3. What different methods of writing have people used? 4. How did the Indians send messages by smoke signals? 5. Where was Pergamas?

5. *Selecting material read*

Find the paragraphs that give answers to these questions:

1. What inventions did the Egyptians make that improved the making of records? 2. What metals have been used in writing? 3. In what ways did the Indians make messages? 4. What was the difference between papyrus rolls and parchment scrolls? 5. How did parchment happen to be invented?

6. *Organizing ideas* (Using pages 139–140)

Pupils may complete this skeleton outline:

How the Egyptians Made Papyrus

I. The pithy part of the stalk was split into strips
II.
  A.
  B.
  C.
III.
IV.
V.

7. *Remembering ideas*

Find the ideas you would need to remember if you told

someone what tools have been used for writing on any kind of material.

SWEDISH WEAVERS LONG AGO AND NOW

pages 152-158

A. Introducing the Story

Raise and discuss the following questions:

1. Do you remember what other crafts the children in Miss Strong's class decided to study? (Weaving and pottery making) 2. What pieces of fine weaving have you seen? 3. How do you suppose people wove cloth hundreds of years ago? 4. Do you know in what handicrafts the people of Sweden were or are very skillful? (Perhaps this story will tell you.)

B. Introductory Reading of the Story

This selection should be read silently. A suggested purpose is: *What crafts have the Swedish people developed?*

The following questions may be used for discussion:

Pages 152-153. 1. Whom did Ingrid bring to school to talk to the children? 2. What did her grandfather talk about? 3. What did the Viking women do with the cloth they wove? 4. How did they learn to weave? 5. How did they decorate their cloths?

Pages 154-155. 1. What stories did the Viking women's textiles tell? 2. How did the Viking women get their dyes? 3. Where did they get their patterns and designs?

Pages 156-157. 1. What did Mrs. Larsen talk about? 2. At what different crafts did the women work in Sweden? 3. What things did the men do?

Page 158. 1. What caused the Swedish people to lose interest in handicrafts? 2. What has been done to keep up the interest in weaving?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. Why was it necessary for more people to learn

to weave hundreds of years ago than it is now? 2. Why do you think the Swedish people are proud of their handicrafts? 3. Do people in your community feel the same way about handicrafts? How do you know?

Other Activities: 1. Can you make a collection of cloths in your community that were woven in Sweden? Perhaps you can get someone into your town to tell you more about Swedish weaving. 2. Swedish people are well-known for their wood carving. See what you can find out about this work. 3. Find out more about the Vikings and things they made.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. Thousands of years ago all the weaving of cloth was done in Sweden. 2. The Vikings learned weaving from the ancient Greeks. 3. The Swedish women did not learn to dye cloth until the Arabs conquered the country. 4. Swedish women do not use any craft other than weaving. 5. All weaving was done for the making of clothes. 6. The Swedish people are proud of their handicrafts. 7. The Viking women wove cloth with designs that told a story. (True: 6, 7.)

2. *Reading for details* (Using pages 153–155)

1. Where was weaving being done in the Bronze Age? 2. What did the Viking women do with the cloaks they made? 3. What were the Viking looms like? 4. Where did the Viking women get black yarn? 5. What plants did the women use in making dyes? 6. From where did the Viking traders bring textile designs? 7. How else did the Vikings get to see foreign designs?

3. *Drawing conclusions*

1. Did the Viking women know how to make thread or yarn? How do you know? 2. Did the Viking women make yarns of all colors? How do you know? 3. Did the Viking women copy any patterns? How do you know? 4. Were the Vikings Christians?

How do you know? 5. Do you think Swedish people did more of the work in building and furnishing their homes than we do today? How do you know?

4. *Locating information*

Here are the titles of eight books. In which of these would you look to try to find something about weaving?

1. Berry, Erick, *Black Folk Tales.* 2. Rathbone, Lucy, and Tarpley, Elizabeth, *Fabrics and Dress.* 3. Cheyney, E. G., *What Tree Is It?* 4. Lent, Henry B., *Diggers and Builders.* 5. Smith, Susan, *Made in Sweden.* 6. Hamilton, Edwin T., *Tin-Can Craft.* 7. Saloman, Julian H., *The Book of Indian Craft and Indian Lore.* 8. Olcott, Frances Jenkins, *Story-Telling Poems.*

5. *Selecting material read*

Find the paragraphs that give answers to these questions:

1. How do Swedish people feel about their handicrafts? 2. Could the Viking women make designs of their own? 3. Did the Viking women like to decorate the cloth they made? 4. What handicrafts did the Swedish men have? 5. Did the Vikings trade with other people?

6. *Organizing ideas*

The last paragraph beginning on page 57 tells about work that the Swedish women and girls did. Pupils may complete this skeleton outline:

WORK DONE BY SWEDISH WOMEN AND GIRLS

I. Weaving
- A. Rugs
- B.
- C. Linen
  - 1.
  - 2.
- D.

II. Knitting
- A.
- B.
- C.

III.
- A.
- B. Wall hangings

7. *Remembering ideas*

Find ideas you would need to remember if you were going to tell someone of handicraft work that Swedish women did besides weaving and knitting.

MASTER POTTERS IN CHINA
FOR THE EMPEROR OF CHINA

pages 161-178

A. Introducing the Stories

Raise and discuss the following questions:

1. Do you suppose it was harder to make good pottery many years ago than it was to weave fine cloth? 2. Why is pottery glazed? 3. What people would you guess were famous for making pottery? How do you suppose they made it? (Perhaps these stories will tell you.)

B. Introductory Reading of the Stories

The reading of these selections should be done in two parts. The first section ends on page 165. This material should be read silently. A suitable purpose is: *What important ideas or things in making pottery did the world get from the Chinese?*

The following questions may be used for discussion:

Page 161. 1. What had the group of children who were studying pottery done for the entire class? 2. How had they made pottery?

Pages 162-163. 1. What was the attitude of early emperors toward pottery making? 2. What particular kind of pottery did the Chinese make well?

Pages 164-165. 1. What are peculiar qualities of porcelain? 2. What other fine quality did the Chinese give to their pottery? 3. When did the Chinese make some of their best pottery? 4. What help did the last emperor of the Sung Dynasty give to this art?

The second section begins on page 161. The first reading of this material should be silent. A suitable purpose is: *How did Master Hu Li and his workers become famous?*

For a second reading, the play should be read orally. Different pupils chosen by the class may read the different parts.

C. Using the Stories to Realize the Purpose of the Unit

Discussion: 1. Do you think the Chinese pottery makers were careful and patient in their work? What makes you think so? 2. What do you think the attitude of the potters toward their work was? What was the one thing they seemed most concerned about? (Quality of their products.)

Other Activities: 1. Choose children to memorize the parts and give the play. 2. Find out how pottery made in other countries long ago compared with that made by the Chinese.

D. Rereading the Stories for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. Pottery making is thousands of years old in China. 2. The Chinese made up legends about pottery making. 3. The government in China made pottery making a crime. 4. The way of making porcelain was discovered by the Arabs. 5. The Chinese discovered methods of glazing pottery. 6. Fine pieces of pottery were valuable in China. 7. Some potters made pottery for the emperors. (True: 1, 2, 5, 6, 7.)

2. *Reading for details* (Using pages 162–164)

1. What does the Chinese word for pottery mean? 2. What does legend say that the father of all the arts did? 3. When did the Chinese begin to make pottery? 4. What did King Shen Hung do? 5. What has been done with the signs he made? 6. Where was the clay used in the making of porcelain discovered? 7. Why is porcelain pottery called "china ware"?

8. Why did the Chinese call this kind of pottery "porcelain"?
9. How thin is porcelain?

3. *Drawing conclusions*

1. How do you think the Chinese felt toward pottery making when they made up legends about it? 2. How do you think potters in old China felt about the kings? What makes you think so? 3. Did all Chinese people use porcelain? How do you know? 4. Why do you think porcelain breaks so easily that it cannot be used for dishes? 5. Do you think the possession of a large collection of porcelain in China was a sign of wealth? Why?

4. *Locating information*

Which words would you look for in the index of a book to find answers to these questions:

1. How is porcelain made now? 2. What is glazing, as used in making pottery? 3. How valuable did the Chinese think pottery was? 4. What did the Kings do for pottery making in China? 5. When did the making of pottery in China begin?

5. *Selecting material read* (Using pages 162–165)

Find sentences or paragraphs that answer these questions:

1. What kind of pottery is porcelain? 2. How did celadon get out of China? 3. What success did the Chinese have with glazing? 4. What did the government do to encourage pottery making?

6. *Remembering ideas*

Find the ideas you would need to remember if you were to tell someone how the Chinese improved pottery making.

V. Suggested Activities for the Unit as a Whole

1. Make a list of the different handicrafts. Group of pupils may study and report on a handicraft chosen from this list.
2. Pupils may show and explain their own handicrafts to their

classmates. This activity would also make a good assembly program.

3. Find out more about what contributions the Arabs made to the art of writing.

4. Study the history of language. How did people get a spoken language? Why did they invent a written language? Use the encyclopedia and history books.

5. Find out how weaving done years ago in one country compared with that done in others.

6. Some of the very finest weaving is found in the hand-woven Oriental rugs made in Persia. Find out how these rugs are made. Can you imagine one family's spending two years weaving one rug?

7. Make a portfolio or record book on handicrafts of the Middle Ages, or on handicrafts of today. Different groups of pupils may be responsible for different sections of the book.

8. Study the history of numbers and measures. How did people learn to count? How did they get measures of time, length, weight, and volume? Use the encyclopedia and history books.

9. Find out how good pottery is made today. Pupils may be particularly interested in fine English china.

VI. A Written Test on Basal Concepts

1. What was a gild?
2. Were gilds just like, entirely unlike, or something like our labor unions?
3. What was a craftsman most concerned about?
4. What was a scribe?
5. Name four materials on which writing was done hundreds of years ago.
6. What were styluses?
7. What was the difference between papyrus and parchment?
8. What is the making of cloth called?
9. What is important in weaving good cloth?
10. What do people weave besides cloth?
11. Name three things for which pottery is used.

12. Name one rule that the gilds had.
13. Write one reason why gilds disappeared.
14. Where has the best pottery been made?
15. What is the finest pottery called?
16. Of what is pottery made?
17. For what craft are the Swedish people best known?
18. What work do you do in which you take a great deal of pride?

UNIT THREE

WONDERS OF OUR WORLD

I. Purpose of the Unit

To acquaint children with some of the wonders in geology, biology, and astronomy, and to stimulate their interest in reading widely in these fields.

II. Preparation for Reading the Unit

(*The Reading-Readiness Approach*)

A. Basal Concepts to be Developed

These concepts are developed through the use of the pictures and informal discussion before the unit is read.

1. What Lake Bonneville was
2. What fossils are
3. What geology is
4. How fossils are formed
5. How animals and plants become petrified
6. What a starfish is
7. What ice sheets are
8. How ice sheets are formed
9. How glaciers wear away soil
10. How Niagara Falls was formed
11. What Mt. Wilson Observatory is
12. How astronomers use telescopes
13. What a comet is
14. Why and how the moon shines
15. What meteors are
16. What meteorites are
17. What the cocoon of the Cecropia moth is
18. What a life cycle is
19. What astronomy is
20. What biology is
21. What an iceberg is

B. Oral Vocabulary to be Used and Understood During the Discussion

geology	telescope	butterfly
fossils	sun	cocoon

limestone
skeleton
petrified
starfish
glacier
ice sheet
iceberg
gorge
observatory
moon
planets
meteor
meteorite
astronomy
comet
crater
moth
zoology
biology
life-cycle
ice cap
iceberg
stage
chrysalis
pupa

C. Suggested Questions for Discussion

Introductory discussion

1. What is the title of the unit? (*Wonders of Our World.*) 2. What do you think "wonders" are? (Things that are particularly interesting or strange.) 3. What do you see in the picture? (Grand Canyon. This is the largest and deepest canyon in the world. It is fifteen miles wide at the widest point, and it is about 280 miles long. One hundred and five miles of the canyon is within Grand Canyon National Park in the northern part of Arizona. At its greatest depth the canyon is more than a mile deep. In general the walls of the canyon are red, but there are deep layers of rocks which are green, pink, grey, chocolate-brown, and black. The canyon has been cut by the Colorado River.) 4. What do you think the people in these pictures on page 182 are interested in? (Read legend below the picture.)

5. What is geology? (Geology is a study of the earth's crust. The earth's crust includes soil, rivers, lakes, oceans, mountains, valleys, and plains.) 6. What is biology? (It is a study of plant and animal life.) 7. What is astronomy? (It is a study of the sun, the moon, stars, and other bodies in the sky.) 8. What are the people doing in the picture at the top? (Watching ocean waves.) 9. What effect will the waves have on the rock? (The rock will be slowly worn away.) 10. What are the people in the middle picture doing? (They are collecting and examining forms of sea life.) 11. What is the study of animal life and plant life called? (Biology.) 12. What is the building that is shown in the lower picture? (An observatory. It houses a large telescope that astronomers use to study objects in the heavens.)

Courtesy, University of Utah

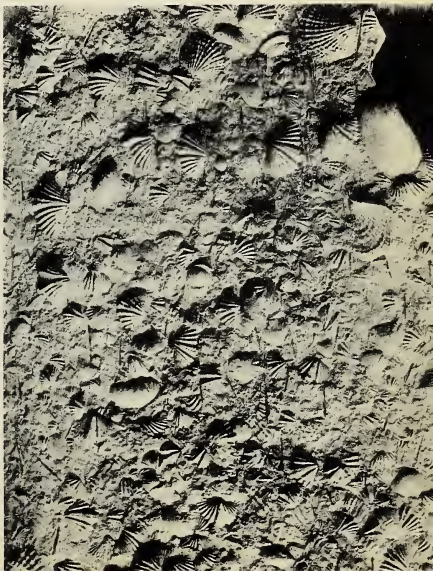
1. *The shore line of ancient Lake Bonneville.*

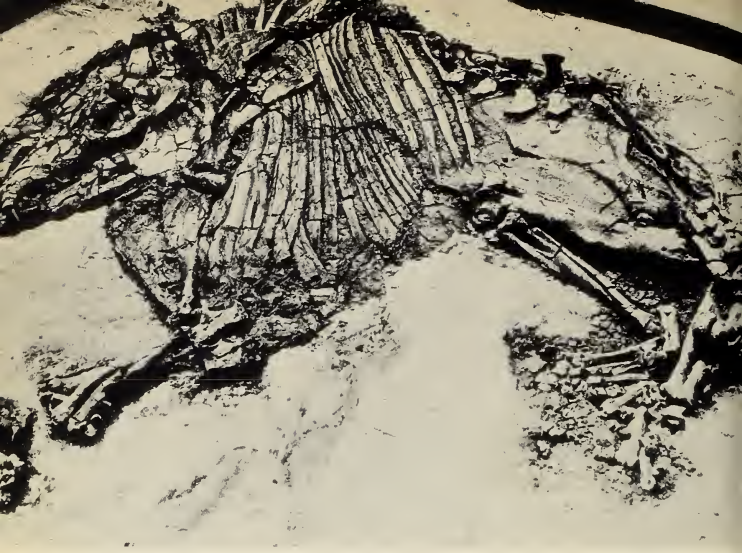
This shelf-like shore line runs for many miles along the side of the Wasatch Mountains in Utah.

Limestone containing the fossils of sea animals is found in these mountains. From fossils like these in the lower picture, geologists can tell that this region was once covered by the sea.

What do geologists study?

2. *Fossils in limestone*





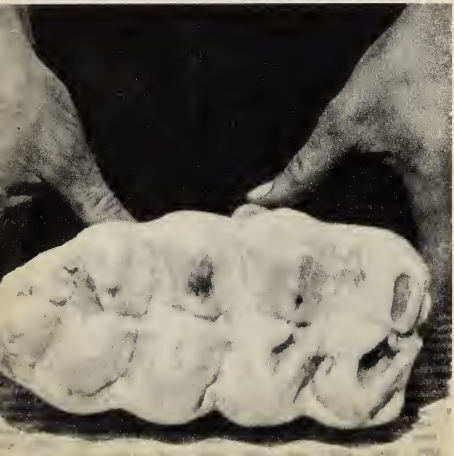
Acme

3. *Fossil-petrified skeleton of an ancient animal.*

Stone-like fossils of animals that lived thousands of years ago are found in many parts of the world.

4. *Fossil-petrified tooth.*

Underwood and Underwood



What does the size of this tooth tell you about the size of the animal?

What can geologists learn from such fossils of animal life long ago?

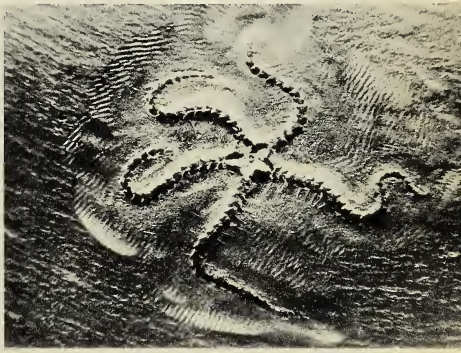
Where could you go to see fossils of animals?

Gendreau

5. *Petrified tree trunks on an Arizona desert show that this region was not always a desert.*

6. *Fossil of a starfish, a sea animal.*

Black Star



Some fossils are only imprints (in rocks) of the shapes of plants and animals. If you found starfish fossils in a desert, what would they tell you about that region?

What do fossils of ferns in coal tell you?

Wide World

7. *An airplane view of a region always covered by glaciers, sheets of snow and ice that are sometimes thousands of feet thick and hundreds of miles long and wide.*

Ewing Galloway

8. *An iceberg.*

As the great mass of snow and ice piles up year after year, its weight causes it to spread out over the surrounding country. If it reaches the sea, huge pieces break off and make icebergs. In what ways are icebergs dangerous?

Where would you expect to find glaciers?

De Cou, from Ewing Galloway

9. *A small glacier creeping down a mountain canyon in Norway.*

As a glacier creeps forward, rocks are broken loose and rolled, or dragged, along by it. Can you imagine what happens to the tops of hills over which it passes? What would a glacier do to valleys through which it passed? What happens to the dirt and rocks in a glacier when it melts? What becomes of the water?

How can you find out whether glaciers once covered the part of the country where you now live? It would be interesting to find out how fast, or slowly, some glaciers creep.

Copyright Tates, from Underwood and Underwood

10 *Niagara Falls.*

11. *The gorge of the Niagara River below the falls.*

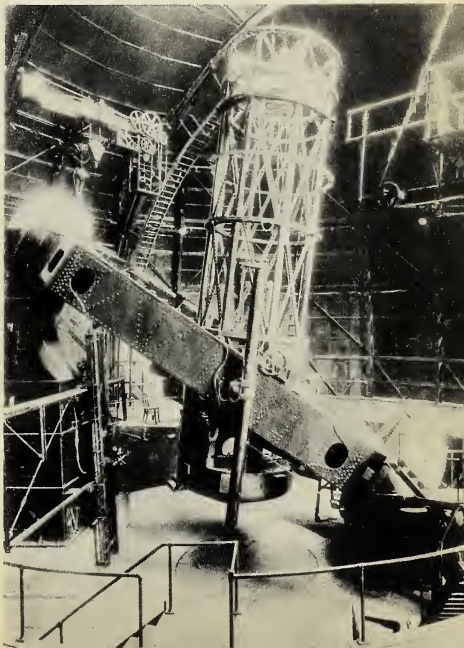
Can you tell how water washes out gullies or deep gorges and canyons?

Courtesy, Mt. Wilson Observatory

12. *Mount Wilson Observatory, near Los Angeles, California, which has a 100-inch telescope.*

13. *Telescope inside Mt. Wilson Observatory.*

Keystone



With the aid of powerful telescopes, astronomers study the sun, moon, planets, stars, comets, meteors, and other heavenly bodies. What interesting things do you know about any of these? What star constellations have you seen in the sky? How does astronomy help us to measure time?

Underwood and Underwood

14. *A photograph of a comet shooting through the skies.*

15. *A photograph of the moon.*

Ewing Galloway

These photographs were taken through a large telescope. The tail of a comet is often millions of miles long.

What makes the moon shine? How often do you see just half of it? The moon is solid like the earth but there is neither water nor air on it. Does the comet's tail appear to be solid?

Acme

16. *A great hole made by a meteorite as it hit the ground near Winslow, Arizona.*

17. *Holding a small meteorite.*

Acme

When you see a little ball of fire go streaking across the sky, what do you call it? A shooting star or a meteor?

Stars are huge heavenly bodies. Our sun is really a star that is near the earth. Many stars are larger but are so far away that they look small.

Acme

18. *Cecropia moth and cocoon.*

Biology, the study of plants and animals, is an interesting hobby of many boys and girls. What have you learned about the life-cycles, the life stories, of moths and butterflies?

Which do you think would be more interesting, botany, the study of plants, or zoology, the study of animals?

Picture No. 1. The shore of ancient Lake Bonneville.

1. Which part in the picture is the shore line of the ancient lake? (The terrace that runs across the middle of the picture.) 2. What was Lake Bonneville (bŏn′vĭl)? (It was a great lake that existed long ago. The old lake bed is mainly a desert today. This unit will tell you more about this wonderful old lake.) 3. Where can this part of the shore line be seen today? (Read legend below the picture.) 4. What has become of this famous ancient lake? (This unit will tell you.)

Picture No. 2. Fossils in limestone.

1. What are fossils? (The preserved remains or traces of animals or plants are fossils. The term is applied to plants and animals that have turned to stone as well as to preserved parts of these objects. Tracks of animals and imprints of leaves which are found in rocks today are also called fossils even though they were made in soft soil or mud millions of years ago.) 2. What causes mud to change to stone? (Heat from the earth and sun, and pressure from layers of soil which later are deposited on the mud, cause the hardening process. Millions of years are needed for the change to be made.) 3. What kind of fossils are shown in the picture? (Fossils of sea animals. The animals were covered with hard shells.) 4. In what kind of stone were these fossils found? (Limestone.) 5. Where was this piece of limestone found? (In the Wasatch Mountains near ancient Lake Bonneville.) 6. How can geologists tell that this region was once covered by the sea? (Geologists have learned that limestone is formed only on the bottom of the seas. The presence of fossils of sea animals in this region proves that the sea once covered this region.)

Picture No. 3. Fossil-petrified skeleton of an ancient animal.

1. What does petrified mean? (In this case, it means *turned to stone.*) 2. What petrified bones of the animal can you easily see in the picture? (The ribs, backbone, legs, and head.) 3. How long ago did this animal live? (Read legend below the picture.) 4. How are fossils like this found? (Sometimes men in

digging ditches, canals, or excavations for buildings, or in cutting through hills for highways and railroads, find fossils similar to this one. Sometimes scientists find them by digging in places which they have chosen after careful study.)

5. How do animals and plants become petrified? (Two important facts about the action of water and rock make it possible to explain how a plant or an animal may become petrified. The first is that rocks dissolve in water — very, very slowly, of course, but they do dissolve. The second is that when rocks have been dissolved in water, the rock materials may be carried to some other place and appear again as rock crystals, such as are found in tea kettles from which water is evaporated, or in caves where the stalactites hang down from the roofs. A plant or animal gets covered up in a bog or in a bed of mud which keeps the remains from decaying rapidly. Running water carries down more and more soil into the bog, buries the plant or animal deeper and deeper, and keeps every part of it saturated. The mud surrounding the object becomes harder and harder until it gets to be a rocklike case. As the plant or animal decays very, very slowly, rock crystals form to take the place of each tiny part as it disappears. By this process, through many, many years, every part of the entire plant or animal is slowly replaced by rock crystals which become cemented together to form an object of stone.)

Picture No. 4. Fossil-petrified tooth.

1. How can you tell that this tooth is a large one? (Compare its size with the size of the man's hands.) 2. What does the size of this tooth tell you about the size of the animal? (The animal that produced the tooth was indeed a huge one.) 3. What can geologists learn from such fossils of animal life long ago? (They can learn a great deal about the size and form of animals from fossil bones. By studying this tooth geologists can tell that this animal ate plants for food. This tooth, you will notice, has a wide flat surface for grinding leaves and stems of plants.) 4. Where could you go to see fossils of animals? (Museum.)

Picture No. 5. Petrified tree trunks on an Arizona desert show that this region was not always a desert.

1. How large are the petrified tree trunks? (The largest one shown is about three feet thick and twenty feet long. You can see, of course, that only parts of tree trunks are shown in the picture.) 2. What conditions are necessary for the growth of large trees? (Warm climate, good soil, and plentiful rainfall.) 3. Do you suppose that region once received plentiful rainfall? Why?

Picture No. 6. Fossil of a starfish, a sea animal.

1. How many arms does the starfish have? (Five.) 2. Where do starfish live? (In the sea only, wherever the water is warm. Many are found along the southern sea coasts of our country.) 3. Do you know how a starfish can feed upon clams and oysters, and how it can replace an arm that has been broken away? (This unit will tell you.) 4. If you found starfish fossils in a desert, what would they tell you about that region? (That the region was once covered by sea water.) 5. What do fossils of ferns in coal tell you? (They tell you something about the size and shape of the ferns which grew millions of years ago in the part of the country where the coal was mined. They also tell that the climate was warm and moist.)

Picture No. 7. An airplane view of a region always covered by glaciers, sheets of snow and ice that are sometimes thousands of feet thick and hundreds of miles long and wide.

1. What are large areas of ice which does not melt from one year to the next called? (Ice sheets and icecaps. Icecap is the name given to the thickest central part of a great ice-covered area.) 2. Where are some great ice sheets and icecaps found today? (In Antarctica and Greenland.) 3. Do you know that a great ice sheet once covered the northern part of the United States and Southern Canada? (This unit will tell you about it.)

Picture No. 8. An iceberg.

1. What is an iceberg? (A large body of floating ice.) 2. How are icebergs formed? (Read legend beside the picture.) 3. In what way are icebergs dangerous? (Sometimes icebergs move

into the paths of ships and cause collisions. Occasionally a ship is caught between two icebergs and is crushed.) 3. Where are icebergs most commonly found? (In northern seas and southern seas.)

Picture No. 9. A small glacier creeping down a mountain canyon in Norway.

1. What is a glacier? (A great body of ice on land. It moves along very slowly.) 2. What happens to the rocks in a canyon as a glacier slowly moves along over them? (They are broken up and pushed along by the glacier.) 3. Can you imagine what happens to the tops of hills over which glaciers pass? (The tops of the hills are broken, scraped, and rounded off.) 4. What does a glacier do to valleys through which it passes? (The valleys are deepened and widened.) 5. What happens to the dirt and rocks in a glacier when it melts? (The dirt and rocks usually remain where the melting glaciers leave them. They sometimes pile up dams across canyons and cause beautiful lakes to form.) 6. What becomes of the water as a glacier melts? (Usually it flows away to the sea. Occasionally it is held back by a dam of dirt and stones at the foot of the melting glacier. Then the water of the melting glacier becomes a lake.)

7. How can you find out whether glaciers once covered the part of the country where you now live? (Geologists have discovered many different signs in soil, rocks, and streams, on hillsides and in valleys which were produced by glaciers, but many of these signs cannot be easily described. The markings made by glaciers on rocks are the best signs for you to look for. Rounded and polished rocks mixed with others which are grooved or streaked with shallow trenches which run in straight lines across their flattened surface are good signs of glacier action.) 8. How fast do glaciers move? (All glaciers do not move with the same rate of speed. Some travel less than an inch in a day. Few move faster than a few feet a day.)

Pictures Nos. 10 and 11. Niagara Falls, and The gorge of the Niagara River below the falls.

1. Where are the Niagara Falls? (On the Niagara River.

This river flows from Lake Erie to Lake Ontario.) 2. How do geologists say the Niagara River was formed? (Once a great ice sheet from Canada pushed its way down into the region the Great Lakes now occupy. The ice sheet caused great changes in the surface of the land. Rivers were filled with dirt and rocks and great basins were dug by the plowing ice sheet. Later, when the ice sheet melted, water from it overflowed the basins that the ice sheet had scraped out and made its way to the sea. The Niagara River was formed at that time.) 3. When do geologists think that the Niagara River was formed? (About 25,000 years ago.) 4. What causes the Niagara Falls? (Layers of hard rock which extend several miles upstream from the Falls. The stream's bed above the Falls is about 167 feet higher than its bed below the main falls.) 5. What do you suppose is happening to the layers of hard rock as the water pours over them at the fall? (They are being slowly worn away. Since 1906 they have been worn away at a rate of two feet and four inches each year. 6. At that rate how many years has it taken to wear away a mile? (Let class compute.)

7. What changes in the waterfalls does the wearing-away of the rocks cause? (It causes the falls to move slowly upstream.) 8. How far upstream have the falls moved since the Niagara River was formed? (About seven miles. Picture No. 11 shows the gorge that the cutting-back of the falls produced.) 9. About how many years has that taken, at the rate given in question 5? 10. Can you tell how water washes out gullies or deep gorges and canyons? (As water moves along, it loosens tiny particles of dirt and stones and carries the particles away. In long periods of time deep gullies, gorges, and canyons are cut by running water.) 11. What great canyon have you seen in a picture in this unit? (Grand Canyon — title page.)

Pictures Nos. 12 and 13. Mount Wilson Observatory, near Los Angeles, California, which has a 100-inch telescope, and Telescope inside Mount Wilson Observatory.

1. What do astronomers use the telescope for? (Read legend. It should be understood that the 100-inch telescope is used for

taking pictures of objects in the sky. This telescope, 100 inches in diameter, automatically takes a picture of the sun every three minutes when it is used in the study of the sun.) 2. Why do astronomers take pictures of objects they wish to study with the 100-inch telescope rather than study the objects with their eyes? (They have learned that a photographic plate is more sensitive than the human eye. In other words an astronomer can take a picture of more than he can see. The camera does not get tired, and it makes a permanent record of more things than any observer could see at one time. After the picture is made, astronomers study it.) 3. Is this 100-inch telescope the largest in the world? (It was until recently.) 4. What have you heard or read about a new 200-inch telescope? 5. In which building in Picture No. 12 is the 100-inch telescope kept? (See right side of picture. A 60-inch telescope is in the buiiding in the center of picture.) 6. What are the towers shown in this picture? (The tallest one carries a beacon light for airplane pilots. The other one is an observation tower from which one may look down on the city of Los Angeles.)

7. What do you know about stars, comets, meteors, and other heavenly bodies? 8. What is a constellation? (A group of stars.) 9. What star constellations have you seen in the sky? 10. How does astronomy help us to measure time? (This unit will tell you.) 11. In Picture No. 13 which object is the 100-inch telescope? (The large upright object in middle of the room.)

Picture No. 14. A photograph of a comet shooting through the skies.

1. What is a comet? (No one knows just how comets are formed. It is known that they are made of millions of pieces of material similar to the materials of which the earth and stars are made. The head of a comet has many large pieces of this material. The tail is made up of small pieces. The light of comets nearest to our earth is only the light of the sun shining upon them.) 2. How do astronomers study comets? (By the use of telescopes mainly. Comets are not often seen by the unaided eye.) 3. How fast do comets travel? (Different comets travel

at different rates of speed. Many of them travel several hundreds of thousands of miles an hour.) 4. How long are tails of comets? (Read legend below the picture.) 5. Does the comet's tail appear to be solid?

Picture No. 15. A photograph of the moon.

1. How were the photographs of the comet and the moon taken? (Read legend.) 2. What makes the moon shine? (The light we see on the moon is caused by the sun shining upon it. The moon has no light of its own.) 3. How far is the moon from the earth? (About 240,000 miles.) 4. How often do you see just half of the moon? (Twice in twenty-nine and one half days.) 5. Is the moon solid like the earth? (Read legend beside the picture.) 6. What are the pits on the moon called? (Craters. Some of them are 20,000 feet deep and 100 miles wide.) 7. What are the dark spots on the moon called? (Oceans.) 8. Do you think there are oceans filled with water on the moon? (Read legend.)

Picture No. 16. A great hole made by a meteorite as it hit the ground near Winslow, Arizona.

1. When you see a little ball of fire go streaking across the sky, what do you call it? A shooting star or a meteor? (You should call it a meteor.) 2. Why should it not be called a shooting star? (Stars are billions of times larger than meteors. Read legend.) 3. What is a meteor? (Bits of stone or metal that fall toward the earth from the heavens and give off a bright light as they pass through the earth's atmosphere.) 4. What is a meteorite? (An object of stone or metal which falls upon the earth from the heavens.) 5. In the picture, do you see a road leading up to the rim of the hole made by the meteorite? (See left side of picture.) 6. Can you see the road as it runs along the rim of the crater or hole? (See right side of picture.) 7. Do you know how large and deep this great hole is? (This unit will tell you.)

Picture No. 17. Holding a small meteorite.

1. What does the meteorite resemble? (A large cinder.) 2.

Do you think it was hot when it struck the earth? (Most meteorites become very hot as they pass rapidly through the earth's atmosphere.) 3. Where are meteorites usually found? (In fields. Farmers uncover them with their plows.) 4. What is usually done with a meteorite when it is found? (Placed in a museum.)

Picture No. 18. Cecropia moth and cocoon.

1. What have you learned about the life cycles or the life stories of moths and butterflies? (Pupils may tell what they know. It should be understood that there are four distinct stages in the life cycle of a moth or butterfly. These are the egg stage, larva or caterpillar stage, the pupa stage, and the adult stage.) 2. Which object in the picture is the cocoon? (Cocoon is shown on the left side of the picture hanging from a twig.) 3. In what stage, or part, of its life cycle is the insect when it is in the cocoon? (Pupa stage.) 4. In what stage of the life cycle is the moth? (The adult stage.) 5. Do you know the life cycle of a butterfly? (This unit will tell you about it.) 6. Which do you think would be more interesting; botany, the study of plants, or zoology, the study of animals?

D. Suggested Group Activities for Optional Use

1. Examine broken pieces of limestone that are used in making concrete to see if you can find fossils. Pieces of limestone can usually be obtained wherever cement is sold.

2. Visit a museum, if convenient, to study the fossils on display.

3. Visit a bare hillside to study the effects that running water has had on the soil.

4. Find out what planets are in our solar system and notice the position of their orbits, or paths, around the sun.

5. Collect insect eggs and put them in glass jars and keep them until they hatch. Insects lay eggs on the underside of leaves, in cracks in the bark of trees, on posts and stones, and on the sides of buildings.

6. Collect cocoons of moths and chrysalises of butterflies. Keep them in wire cages until the adult insects emerge.

III. Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills

A. Order of Selections in the Unit

1. The Science Club, pages 183–200
2. The Petrified Fern, pages 202–203
3. Creeping Ice, pages 204–218
4. Lawrence and the Monarch Butterflies, pages 220–236
5. The Tired Caterpillar, page 236
6. Shooting Stars, pages 238–254
7. The Falling Star, page 254
8. Miracles, pages 256–257

B. Classification of the Selections

The following chart indicates which selections are best suited for use in developing a given reading habit or skill:

Reading Habits and Skills	Selections							
	1	2	3	4	5	6	7	8
1. Getting the main ideas	x		x	x		x		
2. Reading for details	x		x	x		x		
3. Drawing conclusions	x		x	x		x		
4. Locating information			x			x		
5. Selecting material read	x		x	x		x		
6. Organizing ideas	x		x	x		x		
7. Remembering ideas	x		x	x		x		
8. Oral reading		x			x		x	x

IV. Teaching the Individual Selections

THE SCIENCE CLUB

pages 183-200

A. Introducing the Story

Raise and discuss the following questions:

1. Do you belong to a club? 2. What does the club do? 3. What do people study when they study science? 4. What do you think some of the things are that a science club would do?

B. Introductory Reading of the Story

The reading of this story should be done in two parts. The first division may end at the bottom of page 192. The reading of this material should be done silently, with or without a definite purpose. A suitable purpose is: *What things did the children tell about during the first part of the program?*

The following questions may be used for discussion:

Page 183. 1. Why was Miss Stewart puzzled? 2. Which children do you think knew what was going on?

Pages 184-185. 1. What did Betty tell Miss Stewart? 2. How was the note made readable? 3. What was the invitation about? 4. Why do you think Gerald wrote the note as he did? 5. What fields of science were to be represented in the program?

Pages 186-187. 1. Of what does the crust of the earth consist? 2. Where is the Great Basin? What kind of country is it? 3. What was the Basin many years ago?

Pages 188-189. 1. How long do you think it would take nature to form such a basin? 2. How was Lake Bonneville formed? 3. What would cause the lake to become larger? 4. What plant and animal life grew up around Lake Bonneville? 5. Why did Lake Bonneville drain at the northwest corner? 6. What prevented all the water from draining out?

Pages 190-191. Why did the lake shrink into such a small salt lake?

Pages 192. 1. What tracks did Lake Bonneville leave? 2. How do geologists know what lands were once the bottom of an ocean?

The second part of the story may be read silently. A suitable purpose is: *What interesting things in biology and astronomy were presented in the program?*

Page 193. Where did Elsie say her starfish was found?

Pages 194-195. 1. How is the starfish different from other fish which you know, or about which you have read? 2. Why did the fisherman think a starfish could not eat a clam or oyster? 3. How did the biologist prove that it did? 4. How does the starfish get the shell of the clam or oyster open? 5. What peculiar way has he of eating?

Pages 196-197. 1. Why were the starfish unpopular with fishermen? 2. Why were the fishermen unable to destroy the starfish? 3. How are clocks cared for in the Naval Observatory? 4. Why do you think perfect time should be kept?

Pages 198-199. 1. How is a transit always set? 2. Where does the chronograph record time? 3. How does the observer use the transit and chronograph? To what places is the correct time passed every day about noon?

Page 200. How did the children let it be known they wanted to join the Science Club?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. What new and interesting things about science did you learn from this story? 2. Which science would you like to read more about?

Other Activities: 1. Collect pictures showing other interesting things about geology, biology, and astronomy. 2. Watch for articles in newspapers and read interesting things in the sciences. Read them aloud to your classmates.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. Geology is the study of plants and animals. 2. The boys and girls on the program of the Science Club told things about astronomy, biology, and chemistry. 3. The Great Basin is in the eastern part of the United States. 4. The Great Basin was once part of the bottom of an ocean. 5. Over thousands of years the climate around Lake Bonneville changed. 6. The starfish eats things that are almost as large as it is. 7. When a starfish is cut into halves, each half grows into a starfish. 8. There is no clock or watch that keeps perfect time. 9. Correct time is kept at the Naval Observatory. 10. Correct time is calculated from the sun and the stars. (True: 4, 5, 6, 7, 8, 9, 10.)

2. *Reading for details* (Using pages 193–196)

1. Where did Elsie find the skeleton of a starfish? 2. Where do starfish live? 3. Where are the starfish's eyes? 4. What do starfish eat? 5. Why didn't fishermen believe that a starfish could open an oyster shell? 6. What are on a starfish's feet? 7. How did the fishermen try to destroy starfish? 8. Why was it a mistake to throw the broken halves of a starfish back into the water? 9. How are starfish destroyed now?

3. *Drawing conclusions*

1. Why was the invitation written with invisible ink? 2. What would fossils of starfish found in a desert show about that country? 3. What do you think the fossil of a fern on a lump of coal shows? 4. If one studied what we call the ice ages, what field of science would he be studying? 5. Could starfish be found on the shores of Antarctica? How do you know?

4. *Selecting material read*

Find paragraphs that answer these questions:

1. How is a transit used? 2. What are the peculiar things about a starfish? 3. What made Lake Bonneville shrink into the Great Salt Lake? 4. How did the climate in the Great Basin change? 5. What are the things which show that Lake Bonneville once existed?

5. *Organizing ideas*

Beginning with the last paragraph on page 191, the next paragraphs tell about the tracks Lake Bonneville left. Pupils may fill in this outline:

TRACKS LEFT BEHIND BY LAKE BONNEVILLE

I. Old shorelines along the rim of the Basin
II.
    A.
    B.
III.
IV.

6. *Remembering ideas*

Find ideas you would need to remember to tell someone what some of the things are that geologists do.

THE PETRIFIED FERN

pages 202-203

Individual children may read this poem aloud. At the close of the reading give time for pupils to raise questions and to make comments, but do not quiz. The questions preceding the poem may be used. Encourage pupils to find and read aloud other poems relating to geology.

CREEPING ICE

pages 204-219

A. Introducing the Story

Raise and discuss the following questions:

1. Can you imagine your part of the country covered with ice hundreds of feet thick? What animals do you suppose would live on it? What plants do you think would grow on it? 2. Do you know that much of North America was once covered with a great sheet of ice? What do you think made it? What do you think became of it? (Perhaps this story will tell you.)

B. Introductory Reading of the Story

This selection should be read silently. A suitable purpose is: *What changes did the ice sheets make in the crust of North America?*

For some classes the reading of the selection may need to be done in two sections. The first section begins on page 204, contains parts I and II and ends on page 210. A suitable purpose for silent reading of this material is: *What were the ice sheets and how were they formed?*

The following questions may be used for discussion:

Pages 204-205. 1. What changes might you see in the earth's crust if you could live for millions of years? 2. What would cause these changes? 3. What happened to the earth's climate millions of years ago?

Pages 206-207. 1. How was the mass of ice formed? 2. What did it begin to do? What happened to rocks and forests as it moved along? 3. What happened when it came to mountains? 4. What did the animals do?

Pages 208-210. 1. What finally made the edge of the ice mass move farther north? 2. How many times did the northern glaciers move south? 3. What animals were best fitted to live near the ice? Why? How could a lake be under the surface of the earth?

The second section begins on page 211. A suitable purpose for silent reading of this material is: *What did the glaciers do to the land and animals in North America?*

The following questions may be used for discussion:

Pages 211-213. 1. How did water from the glacier help to carve out the Mississippi Valley? 2. How was Niagara Falls formed? 3. Where do ice sheets still exist?

Pages 214-215. What happened to the mammoths?

Pages 217-218. 1. Where are the bones of animals of the ice age being found? 2. What signs did the glaciers leave behind them?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. What field of science is this story about? 2. What signs of the ice age could you look for in your neighborhood? 3. What other things in geology would you like to read about?

Other Activities: 1. Collect pictures of prehistoric animals, and pictures of fossils. 2. Look for signs of the ice age in your community. 3. Find other stories about the ice age and read them aloud to your classmates. 4. Find out how coal is formed.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. The crust of the earth does not change. 2. The change in the earth's climate brought about the formation of ice sheets. 3. The ice sheets did not get as far south as the country that is now the United States. 4. Only one advance of the ice sheets has occurred. 5. The ice sheets moved everything in front of them. 6. Many animals died as the ice advanced. 7. The ice sheets made new rivers. 8. The ice sheets carved out valleys. 9. Most of the plant life survived the ice age. 10. The ice age left tracks behind it. (True: 2, 6, 7, 8, 10.)

2. *Reading for details* (Using pages 209–210)

1. How many times did the glaciers move south? 2. How long was the time between the movements? 3. What happened to the places where the ice had been? 4. What animals were the mammoths something like? 5. What direction did the glaciers go as they began to shrink? 6. When did the ice melt the most rapidly? 7. What did ice lakes do as the weather grew warmer? 8. What became of the rocks and dirt that the water carried down from the mountains? 9. Why did the ice lakes stay after glaciers had melted?

3. *Drawing conclusions*

1. What would have happened to any building in front of an

advancing ice sheet? 2. What would people have done as the ice advanced? 3. Do you think the Mississippi River would exist if the ice age had not occurred? Why? 4. In what way do you think the land in North America would have been different if the ice sheets had not come south? 5. Were mammoths hardier than other animals? How do you know?

4. *Locating information*

Which words would you look for in the index of a book to find answers to these questions?

1. What fossils have been found in deserts? 2. How is coal formed? 3. What work do geologists do? 4. In what part of the United States was Lake Bonneville? 5. What are the causes of soil erosion?

5. *Selecting material read*

Find paragraphs that give answers to these questions:

1. What happened to animals as the ice advanced? 2. What caused the ice sheets to form? 3. What caused the ice sheets to melt? 4. What happened to plants as the ice advanced? 5. What animals lived at the time of the ice sheets?

6. *Organizing ideas*

The last paragraph on page 204 tells of forces that cause changes in the earth's surface. Pupils may fill in this skeleton outline:

FORCES THAT CHANGE THE EARTH'S SURFACE

I. Pressure in the earth's crust
II.
  A.
  B.
  C.
III.
IV.
V.
VI.
  A.
  B.
  C.

7. *Remembering ideas*

Find ideas you would need to remember if you were to tell someone how the ice sheets formed rivers.

LAWRENCE AND THE MONARCH BUTTERFLIES

pages 220-236

A. Introducing the Story

Raise and discuss the following questions:

1. How many of you have seen a monarch butterfly? What did it look like? 2. Do you know what it was before it became a butterfly? 3. Do you know anything about the life cycle of a monarch butterfly? (Perhaps this story will tell you.)

B. Introductory Reading of the Story

The story should be read silently. A suitable purpose is: *What are the different stages in the life cycle of a monarch butterfly?*

For some classes, the reading of the story should be done in two sections. The first section includes only Part I and ends on page 228. A suggested purpose for silent reading of this material is: *What did Jerry do to help Lawrence learn about the monarch butterfly?*

The following questions may be used for discussion:

Pages 220-221. 1. What science includes the study of plants and animals? 2. Where was Lawrence lying? 3. What flowers were near him? 4. What had the doctor said that Lawrence must do?

Pages 222-223. 1. What insect saw the big morning-glory blossom? 2. What had Jerry told Lawrence about the monarch butterfly? 3. What did the butterfly do?

Pages 224-225. 1. What frightened the butterfly? Where did it go? 2. For whom was Lawrence waiting?

Pages 226-227. 1. What did Jerry do after dinner? 2. What did he bring back? 3. What was on a leaf of the plant?

Page 228. What did Jerry tell Lawrence to do?

The second section of the story begins on page 228 and contains Parts II and III. A suggested purpose for silent reading of this section is: *What did Lawrence learn about the monarch butterfly?*

The following questions are suggested for discussion:

Pages 228-229. 1. What happened on the leaf of the plant the next morning? 2. Why do caterpillars eat so much?

Pages 230-231. 1. What new thing did Jerry tell Lawrence to watch for? 2. How does a caterpillar get out of its skeleton? 3. What had Mrs. Clark been doing for Lawrence through the weeks?

Pages 232-233. 1. Why did Mr. Clark and Lawrence go to the city? 2. What did Lawrence find when he got home? 3. What did the chrysalises look like?

Pages 234-236. 1. What did Lawrence learn about monarch butterflies from Jerry's books? 2. What change did Lawrence find in the chrysalises later in the summer? 3. How did the butterfly get out of the chrysalis? 4. What did it do as soon as it was out? 5. What had Lawrence learned to do?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. What other things in biology do you think would be interesting to read about? 2. Do you think the study of biology would be more interesting than the study of geology? Why?

Other Activities: 1. Find out what other animals or insects have a life cycle. 2. Tell your classmates what you know about the habits of a certain bird, animal, or insect.

D. Rereading the Selection for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. Lawrence's cot was near a morning-glory vine. 2. Lawrence

learned things about monarch butterflies by reading in Jerry's books. 3. Jerry brought Lawrence a milkweed plant on which eggs had been laid by the caterpillars. 4. Butterflies hatched out of the eggs. 5. Jerry did not get to see caterpillars hatching. 6. The caterpillars spun chrysalises around themselves. 7. Lawrence saw a butterfly come out of a chrysalis. 8. Lawrence's health did not improve. (True: 1, 2, 6, 7.)

2. *Reading for details* (Using pages 230–232)

1. What did the caterpillars eat? 2. How many plants did Jerry have to get for them? 3. What did Lawrence think was wrong when the caterpillars would not eat? 4. What did Jerry say was the matter? 5. Where is a caterpillar's skeleton? 6. How long was the largest caterpillar when Jerry said they were getting ready for the long rest? 7. Why did Lawrence not see the caterpillars begin the long rest? 8. How long was Lawrence in the city?

3. *Drawing conclusions*

1. Do you think all eggs laid by monarch butterflies hatch? What makes you think so? 2. Do all caterpillars that hatch from a monarch's eggs go into the long rest period? How do you know? 3. Does a monarch butterfly have some of the same colors as the caterpillar does? How do you know? 4. Do monarch butterflies stay in the same neighborhood where they came out of their chrysalises? How do you know?

4. *Selecting material read*

Find paragraphs that answer these questions:

1. What is a chrysalis like? 2. What is the metamorphosis period? 3. What things did Lawrence actually see happen to the eggs, caterpillars, and chrysalises? 4. What things did Lawrence learn about the monarch butterfly that he did not see?

5. *Organizing ideas*

Arrange these ideas in the order that they happened:

1. The butterflies came out of their chrysalises. 2. The butter-

flies laid eggs. 3. The caterpillars made their chrysalises. 4. The caterpillars hatched out of the eggs. 5. The caterpillars went into the long rest. 6. The caterpillars shed their skeletons. (Correct order: 2, 4, 6, 3, 5, 1.)

6. *Remembering ideas*

Find the paragraphs that tell ideas you would need to remember if you wanted to tell someone what the steps are in the life cycle of a monarch butterfly.

THE TIRED CATERPILLAR

page 236

Individual pupils may read this poem aloud. Give time for discussion, but do not quiz. Encourage pupils to find and read aloud other poems about caterpillars or butterflies.

SHOOTING STARS

pages 238-254

A. Introducing the Story

Raise and discuss the following questions:

1. Have you ever seen a shooting star? What did it look like? Do you know what it really was? 2. Have you ever seen a meteorite? What did it look like? What did you do with it? 3. Do you know anyone who found meteorites and sold them? (Perhaps this story will tell you.)

B. Introductory Reading of the Story

This selection should be read silently. A suitable purpose is: *What are meteorites and how do they get on earth?*

The following questions may be used for discussion:

Page 239. 1. What were the members of the Clark family talking about on their front porch? 2. Where had Alice been? 3. What is Mt. Wilson Observatory?

Pages 240-241. 1. What are shooting stars? What are

meteors? 2. How many meteors fall? What becomes of most of them? 3. What are meteorites? 4. Where did people once think meteors came from? 5. How do meteors travel? When do they fall into a planet?

Pages 242-243. 1. How do meteorites fall? What causes a shower of meteors? 2. Why does a meteor burn as it falls? 3. What are meteorites made of?

Pages 244-245. What happened to Mrs. Kimberly in Kansas?

Pages 246-247. 1. How large are meteorites? 2. What happened when the big meteorite fell in Siberia?

Pages 248-249. 1. Where has the largest meteorite fallen? 2. What did Alice plan to do with Bob and Sally?

Pages 250-251. 1. How large is the crater in Arizona? 2. How large do people think the meteorite is?

Pages 252-253. 1. How did the sides of the crater get so high above the level of the plain? 2. What do you think happened when the meteorite fell? 3. What did Alice find when she and the children returned home?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. What other things in astronomy would you like to read about? 2. What different things do astronomers study? 3. Do you think it would be more interesting to study astronomy than geology or biology? Why?

Other Activities: 1. Find stories about the constellations. Read them aloud to your classmates. 2. Find out interesting things about the sun and the moon. Tell your classmates about them. 3. Make a diagram showing the earth in relation to the sun and the different planets.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. Mt. Wilson Observatory is a place where instruments are used in studying plants and animals. 2. What many people call shooting stars are really meteors. 3. A meteor that hits

the earth is called a meteorite. 4. Most meteors that fall into the earth's atmosphere hit the earth. 5. Meteors travel in space. 6. Most meteorites have caused damage on the earth. 7. A shower of meteors is the same as a shower of meteorites. 8. The meteorite crater in Arizona was made in 1910. 9. Bob and Sally visited the crater in Arizona. 10. The meteorite that fell in Arizona lies on top of the ground. (True: 2, 3, 5, 9.)

2. *Reading for details* (Using 250–252)

1. When did Alice and the twins start for the crater? 2. How long was the crater across the top? 3. How deep was the crater? 4. How far had the rim been raised above the ground? 5. What was inside of the crater? 6. What were scattered around the crater? 7. Where was the meteorite? 8. Where did the crushed limestone in the crater come from? 9. How far did the meteorite go into the earth? 10. How far away from the crater were pieces of the meteorite found?

3. *Drawing conclusions*

1. Why do you think some meteorites are valuable? 2. Do you think anyone sees most of the meteors that fall into the atmosphere during a day? How do you know? 3. Do you think a meteorite is larger than it was when it was a meteor? How do you know? 4. Have more meteorites been found in some states than in others? How do you know? 5. What do you think happened to people and animals who lived near by when the meteorite fell in Arizona? How do you know?

4. *Locating information*

Here is part of the index of a book:

> Comets, color, 46; historical happenings connected with, 48–50; journeys, 51; movement of, 53; path of, 54–55; regularity of, 57–58; superstitions about, 59–61; weight of, 47.

On what pages in the book would you look to find answers to these questions:

1. Where do comets travel? 2. How often do comets appear? 3. How have people felt about comets? 4. Are comets larger than meteors? 5. In what ways do comets move in space?

5. *Selecting material read*

Find paragraphs that give answers to these questions:

1. What is the difference between meteors and meteorites? 2. What are meteorites like? 3. What damage have meteorites done? 4. Where have meteorites been found in the United States? 5. Why do meteors fall?

6. *Organizing ideas*

Arrange these events in the order that they happened.

1. Alice and the twins saw the crater in Arizona. 2. Alice received an offer to work at Mt. Wilson Observatory. 3. The family talked about meteors. 4. Alice arrived home from college. 5. Alice and the twins started to Flagstaff. 6. Alice and the twins talked about the crater. (Correct order: 4, 3, 1, 5, 6, 2.)

7. *Remembering ideas*

Find the ideas you would need to remember if you told someone what meteorites are and what they are like.

THE FALLING STAR

page 254

Individual pupils may read the poem aloud. Allow time for discussion if the pupils wish it, but do not quiz.

MIRACLES

pages 256-257

Individual pupils may read the poem aloud. They may wish to read it in concert. Allow time for pupils to raise questions and to make comments, but do not quiz. The questions preceding the poem may be included in the

discussion. Encourage pupils to find and read aloud other poems about science.

V. Suggested Activities for the Unit as a Whole

1. Individual pupils or groups of pupils may wish to follow particular interests in geology and related fields. The following topics upon which reports may be made are suggestive:
   a. How do trees turn to coal?
   b. What animals lived during the age of reptiles?
   c. What were the ancestors of the horse?
   d. What did people used to think about the earth?
   e. What has Roy Chapman Andrews done in his study of dinosaurs?
2. Individual pupils or groups of pupils may wish to follow particular interests in astronomy. The following topics upon which reports may be made are suggestive:
   a. What the sun is like.
   b. What do we know about life on other planets?
   c. How do astronomers work?
   d. What do we know about the stars?
3. Whenever possible, visit museums to see fossils.
4. Make plans to explore the local environment for study of geological influences and changes.
5. Find out if the life cycle of all moths and butterflies is like that of the monarch butterfly.

VI. A Written Test on Basal Concepts

1. What do geologists study?
2. What is included in the earth's crust?
3. Name three influences, or forces, that change the earth's crust.
4. What are fossils?
5. What can we learn of the past by studying fossils?
6. What are some of the tracks of the ice age?
7. What do astronomers study?
8. From what do we get correct time?

9. Tell one thing about the starfish.
10. What are the four stages in the life cycle of a monarch butterfly?
11. What is the difference between a meteor and a meteorite?
12. What is the most interesting thing to you about meteorites?
13. What causes ice sheets?
14. How did the ice sheets change the land?
15. What do biologists study?

UNIT FOUR

IN HAWAII

I. Purpose of the Unit

To give children an understanding of some of the ways in which fishing is done by natives in the Hawaiian Islands, of the geological formation of the Hawaiian Islands, of the cultivation of sugar cane and the work done by scientists to protect this plant against its enemies, and to acquaint pupils with some of the legends of the natives.

II. Preparation for Reading the Unit

(*The Reading-Readiness Approach*)

A. Basal Concepts to be Developed

These concepts are developed through the use of the pictures and informal discussion before the unit is read.

1. Hawaiian Islands (location of)
2. Fishing with a dip net
3. What an octopus is
4. Kilauea (location of)
5. What a volcano is
6. Causes of volcanic eruption
7. Mauna Loa (location of)
8. What an inactive volcano is
9. What cones of a volcano are
10. How sugar cane is planted
11. How sugar cane grows
12. How sugar cane is harvested
13. What scientists do in searching for insect pests
14. What lady beetles are
15. How lady beetles destroy one insect pest

B. Oral Vocabulary to be Used and Understood During the Discussion

dip net	cones	lady beetle
octopus	cuttings	scientist

suction	active	insects
vacuum cup	inactive	pests
squid	lava	stalks
devilfish	proboscis	sugar cane
crater		

C. Suggested Questions for Discussion

Introductory Discussion

1. What is the title of the unit? (*In Hawaii.*) 2. What do you think Hawaii is? (Locate on a map of the Pacific Ocean the Hawaiian Islands.) 3. What direction are the islands from San Francisco? How far away? (Southwest. A little more than 2300 miles.) 4. What kind of climate do you think these Islands have? Why? (Mild. Picture shows tropical palm tree. The native has on very little clothing.) 5. What is the native doing? (Spearing fish.) 6. In what other ways do Hawaiian natives catch fish? (This unit will tell you.) 7. What very important industry have white men developed on these islands? (Sugar. This unit will tell you of some of the things that were done in developing sugar cane.) 8. What stories and legends do you know about the Hawaiian Islands and natives? (This unit contains several very interesting ones.) 9. Read the paragraphs on page 260. (They may be read silently, or orally, by a pupil or the teacher.) 10. After reading, answer, or discuss, the following questions: (1) Who, according to legend, was a wonderful fisherman? (2) What does the legend say about how the Hawaiian Islands came to be? (3) What was the chief occupation of the Hawaiians long ago?

Picture No. 1. An Hawaiian woman fishing with a dip net.

1. How is fishing with a dip net done? (The net has an open mouth. The fisherman places it on the bottom of the sea where the water is shallow. He then watches quietly until a fish swims near the mouth of the net. Then he suddenly and quickly lifts the net upward and catches the fish. Sometimes bait is fastened to the mouth of the net to attract the fish. Sometimes a fisherman sits near a rock or coral reef, blocks the fish in a crevice, and

Bernice P. Bishop Museum

1. *An Hawaiian woman fishing with a dip net.*

2. *Octopus, squid, or devilfish.*

Would you catch large or small fish with a dip net? What other methods of fishing do you know?

Octopuses are often caught with spears or hooks. How many arms (or feet) has an octopus? In what way is an octopus like a starfish?

How does an octopus catch and hold its food?

Ewing Galloway

3. *Crater of the volcano, Kilauea.*

4. *The volcano, Mauna Loa, in action.*

Notice the streams of lava (melted rock) flowing down the sides of Mauna Loa, one of the largest active volcanoes in the world. In what ways may a volcano destroy life and property?

Pix

5. *Haleakala crater, one of the largest inactive volcanoes in the world.*

6. *Volcano cones, Java.*

Gendreau

An inactive volcano is one that for many years has not poured out lava, or smoke, or fire. What is an active one?

Many islands have been built up from the bottom of the ocean by volcanoes.

Can you tell why many volcanoes are cone-shaped mountains?

Acme

7. *Field of young sugar cane.*

8. *Cutting sugar cane.*

Gendreau

Sugar cane is an important crop in the Hawaiian Islands. The juice from which sugar is made comes from the stalk, not from the leaves.

About how tall does the cane grow? How can you tell? About how thick through are the stalks?

Where in our country does sugar cane grow?

Acme

9. *Cuttings of cane stalks, packed for shipping.*

10. *Cuttings used for planting.*

Pieces of cane stalks, called cuttings, are used "as seed" for planting. New varieties that will resist diseases are always being hunted by scientists. How are the cuttings planted?

What are some of the enemies of plants in your neighborhood? In what ways do people fight these enemies?

Underwood and Underwood

11. *A scientist searching for enemies of insect pests.*

12. *Lady beetles.*

P. & A. Photo

About one fourth of all farm crops are destroyed each year by the insect pests. The lady beetles are the natural enemies of the mealy bugs that destroy citrus fruits such as lemons, oranges, and grapefruit. How do you suppose scientists find natural enemies of insect pests?

catches them with the net.) 2. Which of these three ways of fishing with a dip net is the woman using? (The last one.) 3. Would you catch large or small fish with a dip net? (Small fish.) 4. What other methods of fishing do you know? (Children may tell of the ways they know. Fish are commonly caught with hooks, large nets, traps, and spears.)

Picture No. 2. Octopus, squid, or devilfish.

1. How are octopuses caught? (Read legend beside the picture. This unit will later tell you more about how they are caught.) 2. How many arms, or feet, has an octopus? (Eight. Seven can easily be seen in the picture.) 3. Do you see the small cup-like things on the arms of the octopus? (Some appear as white objects, others as colored ones.) 4. Do you know the uses of the cup-like objects? (The octopus uses them to cling to a rock and to hold his prey. The little cups act as vacuum or suction cups.) 5. Can you see the octopus's body? (Dark object on which the arms are growing.) 6. In what way is an octopus like a star fish? (Give pupils opportunity to recall what they learned in connection with Picture No. 6, Unit Three.) 7. How does an octopus catch and hold its food? (The octopus catches its prey with its arms and holds it until the prey becomes paralyzed by a poison which the octopus makes in its mouth. After paralyzing its victim the octopus devours it. The food of the octopus is varied. Usually it feeds upon crabs and fish. There are, however, more than 140 different kinds of octopuses among which there are great differences in food habits.) 8. Do you know that octopuses are sometimes used for human food? (They are sometimes eaten fresh or dried.) 9. Do you think the octopus is a very fierce and dangerous creature? (Octopuses have been known to attack men, but the stories about them make the animal appear really fiercer and more dangerous than it really is.) 10. How large do octopuses become? (The largest one found had arms fourteen feet long.)

Picture No. 3. Crater of the volcano, Kilauea.

1. What is the crater of a volcano? (It is the funnel-shaped

opening of the volcano.) 2. Of what is the crater made? (Its walls are made of lava which has poured out of the volcano and cooled. As lava cools it becomes hard and stonelike.) 3. Where does the lava come from? (From far beneath the surface of the earth.) 4. How is it forced to the top or sides of the cone? (Hot gases deep in the earth force it out.) 5. Is it very hot inside a volcano? (Yes. The temperature has been known to reach more than 2000° F.)

Picture No. 4. The volcano, Mauna Loa, in action.

1. What is an active volcano? (One from which hot gases or lava escapes.) 2. Is Mauna Loa a large volcano? (Read legend below the picture.) 3. Can you see the lava, or melted rock, flowing down the side of the crater? (Streaks of gray on right side of the picture.) 4. In what way may a volcano destroy life and property? (Molten lava sometimes flows down the sides of a volcano and covers farms, homes, villages, and even cities. The gases from volcanoes are often sufficiently poisonous to kill animals and people.) 5. Where are Kilauea and Mauna Loa located? (On the island of Hawaii.) 6. How many other islands are in the group of islands which are known as the Hawaiian Islands? (Seven others. Hawaii is the largest of the group.)

Picture No. 5. Haleakala crater, one of the largest inactive volcanoes in the world.

1. Where is Haleakala (hä′lā·ä′kä·lä′) located? (On Mavi Island — the second largest in the group.) 2. What do you know about Haleakala? (It is the largest inactive volcano in the world. It is 20 miles in circumference and 10,020 feet high. Its name means *House of the Sun.* Perhaps you can guess why it was given this name.) 3. What is an inactive volcano? (Read legend beside the picture.) 4. What is an active one? (Let pupils recall what they learned in connection with Picture No. 4.) 5. How are some islands built up from the bottom of the ocean? (Read legend.)

Picture No. 6. Volcano cones, Java.

1. Locate Java on a map of Asia or the East Indian Archipelago. 2. Can you tell why many volcanoes are cone-shaped mountains? (Volcanoes are built up by melted rock which is forced upward from the inside of the earth. As the lava reaches the surface of the earth it begins to cool. While a part of the lava often flows a considerable distance away from the opening through which it rose to the earth's surface, enough lava remains near the opening to make the part of the volcano around the opening the tallest point. The lava which flows down the volcano's side forms with the peak of the volcano a cone-shaped mountain.) 3. Can you see cones also in the crater of Haleakala? (Picture No. 5, center.)

Picture No. 7. Field of young sugar cane.

1. What important product is taken from the stalks of sugar cane? (Juice which is made into sugar.) 2. Can juice for sugar be taken from the leaves of the plant? (Read legend below the picture.) 3. Which of the two fields of sugar cane is the older? (The one shown on the right side of the picture. By the time this field is harvested the field shown on the left will be ready.) 4. Why were the fields planted at different times? (By planting the cane so that fields must be harvested at different times, the same group of workers can harvest all the fields on a large plantation. This keeps work from being seasonal.) 5. What are the men in the picture doing? (Examining the growing cane to make a report on its condition. One man is writing the report. On visits to the fields, the cane is usually examined for the presence of insect pests and diseases.)

Picture No. 8. Cutting sugar cane.

1. About how tall does the sugar cane grow? How can you tell? (15–20 feet. Compare the height of the cane with the height of the workers.) 2. About how thick through are the stalks? (One and one half to two and one fourth inches.) 3. How is the sugar cane harvested? (The stalks are cut down with a large knife. A knife may be seen in the right hand of the

worker in the foreground of the picture. After a stalk is cut, the leaves and part of the top of the stalk are cut away.) 4. Do you know what is then done with the sugar cane stalks? (They are usually hauled to a mill where the juice is pressed from them by powerful steel rollers.) 5. Where in our country does cane grow? (In the southern states that border the Gulf of Mexico and the Atlantic Ocean.)

Picture No. 9. Cuttings of cane stalks, packed for shipping.

1. Why are cuttings of cane stalks packed and shipped? (Some of the finest stalks are not hauled to the mills at harvest time. Instead, they are packed and sent to markets where people buy them, peel the stalks, and chew them to get the sweet juice from them. Some of the stalks will be bought for planting.) 2. What is usually done with the leaves that are cut from the stalks? (Usually they are plowed under the soil and left to decay. The leaves contain valuable food for growing plants. Sometimes the leaves are raked together and burned.) 3. What will be done with the stubs of the stalks left standing when the best part of the stalks are cut to be shipped away? (Cut and sent to the mills where the juice will be pressed from them and used in sugar making.)

Picture No. 10. Cuttings used for planting.

1. How are the cuttings planted? (A small furrow is plowed in the field and the cuttings are placed in them. They are then covered with soil by a plow.) 2. Do new cane stalks come up from the cuttings? (Yes. Just as new potato plants grow from cuttings of potatoes.) 3. What varieties of cane are scientists always hunting for? (Read legend beside the picture.) 4. What are some of the insect enemies of plants in your neighborhood? (Pupils answer.) 5. In what ways do people fight these enemies? (Pupils may tell what they know. There are several ways of fighting plant enemies. Harmful insects are controlled by four common methods. A poison is placed on the food that the insects eat. Poison is placed on the insects themselves. Insects or diseases which prey only upon the insect pests themselves are

released among the pests. The fourth method is an attack on the breeding and nesting places of the harmful insects. Most of the plant diseases are controlled by sprays which destroy the disease or keep it from spreading.)

Picture No. 11. A scientist searching for enemies of insect pests.

1. What kind of enemy is the scientist looking for? (For signs of disease on the insect pests he has collected.) 2. Suppose he found a diseased insect pest, what would he do about it? (He would find out how the disease could be given to healthy insect pests. If it was found that he could do such a thing, and if the disease proved to be fatal to them, he would use the disease to fight the insects.) 3. What other things might the scientist find out by studying insect pests? (He might discover something about them that would lead to a better way of poisoning them. For example, he might find that a particular insect has mouth parts which show that it eats leaves of plants. The scientist would then know that it could be killed by placing poison on the leaves that the insect eats. If he learns that the insect has a sharp beak or proboscis with which it pierces the skin of leaves or stalks and sucks juices from them, he will know that this insect can be poisoned only by placing something on the body of the insect that will kill it.)

4. What part of all farm crops are destroyed each year by insect pests? (Read legend below the picture.) 5. What instrument is the scientist using to examine the insects? (Magnifying glass.) 6. How are the insects he is studying mounted? (They were first killed with a poison gas. Then they were mounted on pins.) 7. What is the glass-covered container used for? (As a cage for living insects.)

Picture No. 12. Lady beetles.

1. What is a lady beetle? (A name given to a small beetle. Common varieties are russet-colored. Some have small dark-colored dots on the hard wing covers.) 2. How large are lady beetles? (About one-half the size of a coffee bean.) 3. What insect pests do lady beetles prey upon? (Mealy bugs which

destroy lemons, oranges, and grapefruit.) 4. How do you suppose scientists find natural enemies of insect pests? (In addition to the methods mentioned in connection with picture No. 11, scientists study living insect pests on plants in fields, orchards, or forests, wherever the pests live. Occasionally they discover a natural enemy of a given insect pest. The first time lady beetles were seen to eat mealy bugs, the insects were in their natural homes.)

D. Suggested Group Activities for Optional Use

1. Make a list of products of the Hawaiian Islands.

2. Find out what white explorer first visited the Hawaiian Islands and how these islands finally became a territory of the United States.

3. Make a list of insect pests in your community and find out what is done to kill them.

4. Examine a grasshopper's mouth to see if you can suggest a good way to poison grasshoppers.

5. Find out where mosquitoes and houseflies lay their eggs and suggest ways they may be destroyed.

6. Dissolve a spoonful of sugar in a saucepan full of water. Set the saucer aside for a few days and let the water evaporate. Examine the crystals of sugar that remain in the dish.

7. Find out how sugar is taken from the juice of sugar cane.

III. Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills

A. Order of Selections in the Unit

1. Saved by a Shark, pages 261–276.

2. Two Girls at the Pond Gate, and Fishing by Twilight, pages 277–291.

3. A Volcano Erupts; Pele, Goddess of the Volcano; and Restless Fires, pages 293–311.

4. A Plantation Day in Hawaii; Canes from the Head-Hunters; and Searching for Parasites; pages 311–336.

B. Classification of the Selections

The following chart indicates which selections are best suited for use in developing a given reading habit or skill:

Reading Habits and Skills	Selections			
	1	2	3	4
1. Getting the main ideas	x	x	x	x
2. Reading for details	x	x	x	x
3. Drawing conclusions	x	x	x	x
4. Locating information			x	x
5. Selecting material read	x	x	x	x
6. Organizing ideas	x	x	x	x
7. Remembering ideas	x	x		x
8. Oral reading			x	

IV. Teaching the Individual Selections

SAVED BY A SHARK

pages 261-276

A. Introducing the Story

Raise and discuss the following questions:

1. What stories have you heard about animals saving the lives of people? What happened in the stories? 2. What stories have you heard about sharks? Are these great fish dangerous? 3. Can you imagine how a shark could save the lives of two boys? How do you think the fish would do it? Would you expect a story that told such a thing to be a true story or a legend? Why? (Perhaps this story will help you answer these questions.)

B. Introductory Reading of the Story

This story should be read silently. A suitable purpose is: *How were Kalawaia and the strange boy saved from drown-*

ing? Use the glossary for the pronunciation of strange terms.

In case the story needs to be read in two sections, the first should include Parts I and II and should end on page 269. A suitable purpose for reading this section silently is: *What did Kalawaia and the strange boy do together?*

The following questions may be used for discussion subsequent to the reading:

Page 261. Why did Kalawaia's family take care of the shark?

Pages 262-263. 1. What did Kalawaia do for the shark? 2. What did he see on the cliff? 3. What did Kalawaia think about the boy?

Pages 264-265. 1. Where had Kalawaia's father gone? 2. Why were the people of the village disturbed? 3. When did Kalawaia see the stranger again? What did the stranger want him to do?

Pages 266-267. How did Kalawaia do his fishing?

Pages 268-269. What luck did the stranger have at fishing?

The second division begins on page 270. A suitable purpose for silent reading of this material is: *How did Kalawaia happen to go to live with the chief?*

The following questions may be used for discussion:

Pages 270-271. 1. What had the boys failed to notice while they were fishing? 2. What happened to the canoe? 3. What happened to the stranger?

Pages 272-273. 1. What did Kalawaia do to try to get help? 2. Who came to help him? 3. How did the boys get to shore?

Pages 274-275. 1. Who returned to the village the next morning? 2. For whom was the high chief searching?

Page 276. Where did Kalawaia go to live?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. What were some of the activities of the natives who lived where Kalawaia lived? 2. Do you think Kalawaia's

people were superstitious? Why? 3. Do you think this story is a legend? Why?

Other Activities: 1. Find out more about the different ways in which the natives of Hawaii fish. 2. Find out what kinds of canoes Hawaiians use. You may be particularly interested in outrigger canoes. 3. Find out the different ways in which the natives of the islands may be said to be superstitious.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. The shark had been a friend of Kalawaia's family for a long time. 2. The boy that Kalawaia saw on the cliff was his playmate. 3. Kalawaia's father had gone away with other men of the tribe to make war on the island of Oahu. 4. The strange boy was a better fisherman than Kalawaia. 5. The canoe was upset by the shark. 6. Kalawaia went to live with the strange boy. 7. The shark saved Kalawaia's life. 8. The strange boy's father came to the village to look for him. 9. The strange boy's father was the chief. (True: 1, 6, 7, 8, 9.)

2. *Reading for details* (Using pages 261–263)

1. Why was Kalawaia feeding the shark? 2. Whose life had the shark saved? 3. How did the people feel that the shark should be treated? 4. What did Kalawaia feed the shark? 5. Where did he see the strange boy? 6. Why did the shark come close to the rock? 7. Who did Kalawaia think the strange boy might be? 8. How did Kalawaia feel about the stranger?

3. *Drawing conclusions*

1. Do you think Kalawaia's father had confidence in him? Why? 2. Do most boys in Hawaii know how to swim? How do you know? 3. Are you sure that the strange boy did not know how to swim? How do you know? 4. Why do you think the shark came to help the boys? 5. Did the strange boy know much about fishing? How do you know? 6. Do you think this story really happened? What makes you think so?

4. *Selecting material read*

Find paragraphs that give answers to these questions:

1. How did Kalawaia feel about the strange boy? 2. How did Kalawaia and other people in the village feel about the shark? 3. What things did Kalawaia do in saving the strange boy? 4. What things did Kalawaia do in the village? 5. Were the people of the village superstitious?

5. *Organizing ideas*

Arrange these events in the order that they happened:

1. The canoe was swamped. 2. The strange boy's father came to the village. 3. Kalawaia started to swim for shore. 4. Kalawaia's father went on an expedition. 5. Kalawaia saw the strange boy on the cliff. 6. Kalawaia called for help. 7. The shark helped the boys back to shore. (Correct order: 4, 5, 1, 6, 3, 7, 2)

6. *Remembering ideas*

Find the ideas you would need to remember if you were going to tell someone how the two boys did their fishing.

TWO GIRLS AT THE POND GATE
FISHING BY TORCHLIGHT

pages 277-291

A. Introducing the Stories

Raise and discuss the following questions:

1. In what different ways have you learned to fish? Which of these ways do you think is best? Why? 2. How many ways do you know that people use in fishing in Hawaii? 3. Have you ever heard of anyone fishing with a spear? 4. How do you think anyone could catch fish with a spear at night? (Perhaps these stories will help you answer these questions.)

B. Introductory Reading of the Stories

The first part of this selection ends on page 285. A sug-

gested purpose for silent reading of this material is: *How did Lehua and Maile catch fish for the chief's wife?*

The following questions may be used for discussion:

Page 277. What did Lehua think of her baby brother?

Pages 278-279. 1. What news did the boy bring to the hut? 2. Why was Lehua's mother disturbed? 3. Who decided to get the fish? 4. What tools did the girls use for fishing?

Pages 280-281. How did the girls do their fishing?

Pages 282-283. 1. How long did they fish? 2. What things did they have to be careful of on their way home? 3. Why did Lehua have to go back to the pond?

Pages 284-285. 1. Of what things was Lehua afraid on the way back to shore? 2. How did she feel when she reached home?

The second part of this selection begins on page 286. A suitable purpose for silent reading of this material is: *How do Hawaiian boys spear fish at night?*

The following questions may be used for discussion:

Pages 286-287. 1. At what time of day was Tom going fishing? 2. How was the torch made? 3. How did the torch affect the fish? 4. Where did the boys do their fishing?

Pages 288-289. 1. How did the boys try to catch the fish? 2. What caught Tom around the ankle?

Pages 290-291. 1. What did the boys do with the fish as they caught them. 2. What did they do with the octopus?

C. Using the Stories to Realize the Purpose of the Unit

Discussion: 1. What methods of fishing used in these stories were not told about in *Saved by a Shark?* 2. What things must Hawaiian boys and girls be able to do that you do not need to do?

Other Activities: 1. Find other stories about fishing in Hawaii. Read them aloud to your classmates. 2. Collect pictures of fishing and other activities of people in Hawaii. 3. Find out what kind of fish are commonly caught in the waters around the Hawaiian Islands.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas* (Using pages 277–285)

Which of these sentences are true?

1. Because Lehua's mother was ill, she could not catch fish for the chief's wife. 2. Lehua and Maile had never done such fishing before. 3. Lehua and Maile did the fishing that Lehua's mother was told to do. 4. The girls used spears to catch the fish. 5. Maile was afraid of sharks. 6. Maile had to go back to the pond gate to close it. 7. Lehua became afraid on her way home. 8. Lehua felt quite grown-up after she was safe at home. (True: 1, 2, 3, 5, 7, 8.)

2. *Reading for details* (Using pages 286–291)

1. At what time of the day did the boys start to go fishing? 2. How many companions did Tom have? 3. What fuel did they use for the torch? 4. Who was Sam? 5. Why did the boys wear shoes? 6. What made Tom stumble and fall? 7. Why did Peter think Tom had done well even though he did fall? 8. How deep did the water get? 9. How did the fish look in the water? 10. After a fish had been caught, how did the spear have to be lifted?

3. *Drawing conclusions* (Using pages 277–285)

1. Do you think the natives of Lehua's village liked to do things for the chief's family? How do you know? 2. Do you think Hawaiian girls do any of the work that boys do? How do you know? 3. Do you know whether a volcano has ever erupted on Hawaii? How do you know? (Lava rock used to make wall.) 4. Do you think Lehua was a brave girl? Why? 5. Do Hawaiians ever try to stock a body of water with fish? How do you know? (Lehua's father had put little fish in the pond.)

4. *Selecting material read* (Using pages 277–285)

Find paragraphs that give answers to these questions:

1. How did Lehua get to and from the pond gate? 2. How did the girls catch their fish? 3. What dangers did the girls meet in

doing the work? 4. Were Lehua and Maile sisters? 5. How did the fish inside the pond get food?

5. *Organizing ideas* (Using pages 277–285)

Arrange these events in the order that they happened:

1. The chief's wife sent word that fish had to be caught for her. 2. Lehua had to go back to the pond to close the gate. 3. The girls got their fishing equipment together. 4. Lehua walked along the wall. 5. The girls waded and swam to the gate. 6. Maile became afraid of sharks. 7. Lehua arrived home. (Correct order: 1, 3, 5, 6, 2, 4, 7.)

6. *Remembering ideas* (Using pages 286–291)

Find the ideas you would need to remember to explain how Hawaiian boys spear fish at night.

A VOLCANO ERUPTS
PELE, GODDESS OF THE VOLCANO
RESTLESS FIRES

pages 294-311

A. Introducing the Stories

Raise and discuss the following questions:

1. Have you ever seen a picture of a volcano? What does a volcano do when it erupts? 2. What do you suppose a volcano looks like when it is erupting? What damage do you think it could do? 3. What do you think causes a volcano to erupt? (Perhaps these stories will help you to answer these questions.)

B. Introductory Reading of the Stories

The reading of this selection should be done in two sections. The first section ends on page 303. Page 293 may be read aloud by some pupil who reads well at sight or who has read these paragraphs before. Pages 294–303 should be read silently. A suitable purpose is: *Why was the volcano bombed?*

The following questions are suggested for discussion:

Pages 294-295. 1. Whom was Ann visiting? 2. What did Ann want to see? 3. What happened while the family were eating dinner?

Pages 296-297. 1. How did the family get near the volcano? 2. What did the eruption look like? 3. What is lava? Where did it flow from the mountain? 4. How did Jean say the Hawaiian Islands had been made?

Pages 298-299. 1. What did the park rangers say about the eruption? 2. Why do you suppose scientists tried to get some of the gas? 3. Where did the main flow of lava go?

Pages 300-301. 1. Why did it become necessary to control the lava flow? What was Dr. Jaggar's plan? 2. What did the old lei-maker think about bombing the lava flow?

Pages 302-303. 1. What was the effect of the bombing? 2. How was it done? 3. Did the old lei-maker believe in the bombing?

The second division begins on page 304. A suitable purpose for silent reading of this section is: *Why did Pele build so many volcanoes in the Hawaiian Islands?*

The following questions may be used for discussion:

Pages 304-305. 1. Who was Pele? Who was her sister? What happened between them? 2. Where did Pele make her new home? What happened to it?

Pages 306-307. 1. What do you suppose the Hill of Pele really is now? 2. Where else did Pele make a home? What happened each time? 3. Where is Pele supposed to live now? 4. What do you think is the real difference between the volcanoes where Pele was once supposed to have lived and Kilauea?

Pages 308-309. 1. In what way was the young chief of Hawaii superior to other people? 2. What happened when he raced with Pele?

Pages 310-311. 1. What lies between the center of the earth and the crust? 2. Why is magma always expanding? 3. What

happens when there is a weak place in the crust? 4. How were the Hawaiian Islands formed?

C. Using the Stories to Realize the Purpose of the Unit

Discussion: 1. Do you think the volcanoes in Hawaii were made by geological forces or by Pele? 2. How many years do you think it took to build the Hawaiian Islands? 3. If lava is only melted rock, and if the islands were formed by lava, how do you suppose it ever became possible to grow plants on the islands?

Other Activities: 1. Find out more about Mauna Loa. What damage has it caused in past years? 2. Find stories that tell other myths about Pele. Read them aloud to your classmates. 3. Find stories that tell other myths or legends of the Hawaiians. Read them to your classmates.

D. Rereading the Stories for Specific Purposes

1. *Getting the main ideas* (Using pages 294–303)

Which of these sentences are true?

1. The old Hawaiians believed that volcanic eruptions were caused by the goddess Pele. 2. Ann wanted to see a volcano erupt. 3. Lava is solid rock and metal. 4. Both smoke and fire came out of the volcano. 5. The lava flowed down the mountain. 6. All of the erupting took place at one opening in the mountain. 7. The volcanic eruption lasted only one night. 8. The lava flow was bombed becaused the city of Hilo was in danger of fire. 9. The bombs were dropped at the point where the lava flowed into the sea. 10. The bombing stopped the lava flow. (True: 1, 2, 4, 5, 10.)

2. *Reading for details* (Using pages 304–307)

1. Whose side did Pele's family take in her quarrel with her sister? 2. What happened to Pele's lands many times? 3. Who was Pele's brother? 4. What did he do for Pele? 5. Where did Pele make her first new home? 6. Where did she build her home next? 7. What did the Goddess of the Sea do with Pele's lava bones? 8. Why did the Goddess of the Sea know that she had no

more power over Pele? 9. Where did Pele build her last home? 10. How do the natives know that she still lives there?

3. *Drawing conclusions* (Using pages 304–309)

1. Do you think the old Hawaiians know how volcanoes are formed? What makes you think so? 2. What did the old Hawaiians think caused some of their volcanoes to become inactive? 3. What kind of disposition did Pele have? How do you know? 4. What do you think Pele's sister really was? How do you know? 5. What do you think is meant by the statement that now and again people see Pele?

4. *Locating information*

Here is part of the index of a book:

> Hawaiian Islands, chief cities, 51–52; formation of, 45; industries, 48–50; location, 46; population, 46; products, 47–48.

On what pages in the book would you look to get answers to these questions?

1. What are the chief farm crops in Hawaii? 2. What manufacturing is done in Hawaii? 3. What are the main harbors in the islands? 4. For what is Honolulu noted? 5. How many islands are in the group?

5. *Selecting material read* (Using pages 294–303)

Find paragraphs that give answers to these questions:

1. Who believes the myth about Pele? 2. How does an erupting volcano look? 3. What damage may lava do? 4. In what ways are volcanoes being studied?

6. *Organizing ideas* (Using pages 310–311)

Arrange these events in the order that they happened:

1. Soil was formed on the tops of the mountains. 2. Lava broke through the floor of the Pacific Ocean. 3. Lava piled up on the floor of the ocean. 4. Seeds fell in the soil on the moun-

tain tops. 5. The mountain tops pushed up above the sea. 6. People settled on the mountain tops. 7. The mountain tops became known as the Hawaiian Islands. (Correct order: 2, 3, 5, 1, 4, 6, 7.)

A PLANTATION DAY IN HAWAII
CANES FROM THE HEAD-HUNTERS
SEARCHING FOR PARASITES

pages 313-336

A. Introducing the Stories

Raise and discuss the following questions:

1. How many of you know what plants the sugar you use comes from? (Sugar cane or sugar beets.) 2. Do you know where sugar cane is grown? 3. How do you suppose it is raised? 4. What do you suppose the farmers do to cultivate and harvest it? 5. Do you know of any plant that is frequently destroyed by insects? (Cotton, by boll-weevil; corn, by corn borer; wheat and corn by grasshoppers or chinch bugs.) 6. What do you suppose has been done to destroy the insect enemies of sugar cane? (Perhaps these stories will help you to answer these questions.)

B. Introductory Reading of the Stories

The reading of these selections should be done in three parts. The first division ends on page 318. A suitable purpose for silent reading of this material is: *What is done in the raising and harvesting of sugar cane?*

The following questions are suggested for discussion:

Page 313. 1. Who was Jose? 2. What was he going to do?

Pages 314-315. 1. How did Jose start the fire? 2. What did the men do when the fire was out? 3. What did Jose do after the cane was cut?

Pages 316-317. 1. What was to be done with the cane at the mill? 2. What things had Jose done to make the cane grow well? 3. What would be done with the field tomorrow?

Page 318. 1. Who was Tala? 2. What was he particularly interested in?

The second division ends on page 330. A suggested purpose for silent reading of this section is: *What did the expedition of scientists do to improve the raising of sugar cane?*

The following questions may be used for discussion:

Page 319. Why did the expedition go to New Guinea?

Pages 320-321. 1. In what ways is the life of such a scientist as Mr. Pemberton difficult? 2. Who are head-hunters? 3. Why was it important to keep the airplane in good shape?

Pages 322-323. 1. What did the scientists collect in New Guinea before going into the jungle? 2. What was done with their specimens?

Pages 324-325. 1. Over what kind of country did the men fly? 2. How did the natives act when they saw the plane? 3. Where did the plane land? 4. How were the men protected against the head-hunters?

Pages 326-327. 1. How were the head-hunters pacified? 2. What do you think they thought the scientists were? 3. How did the scientists get samples of sugar cane?

Pages 328-330. 1. What other things did the scientists collect from the natives? 2. What other trips did they make? 3. How much of a collection of sugar cane did the scientists make on this expedition? 4. Why did Mr. Pemberton stay in the jungle?

The third division begins on page 331. A suitable purpose for silent reading of this material is: *How did Mr. Muir help the sugar-cane growers?*

The following questions may be used for discussion:

Page 331. 1. How does the beetle borer harm sugar cane? 2. What did the planters decide would have to be done?

Pages 332-333. 1. Where did Mr. Muir go to find a parasite for the beetle borer? 2. What dangers did he have to meet? 3. What parasite did he find? 4. Why did Mr. Muir decide that he would have to take the flies to Honolulu?

Pages 334-335. What were the different difficulties Mr. Muir met in getting the flies to Honolulu alive?

Page 336. How well did the flies succeed in checking the destruction by the beetle borer?

C. Using the Stories to Realize the Purpose of the Unit

Discussion: 1. Do you think scientists have rendered an important service to growers of sugar cane? Why? 2. Do you think it was important for the sugar-cane industry to be developed in Hawaii? Why?

Other Activities: 1. Find out other places where sugar cane is raised. Find out more about how this plant is grown. 2. Find out more about the way in which sugar is made from the canes. 3. Find out what kinds of sugar are made besides cane sugar.

D. Rereading the Stories for Specific Purposes

1. *Getting the main ideas* (Using pages 313–318)

Which of these sentences are true?

1. Jose worked on a sugar plantation. 2. As soon as the cane was cut, Jose set it on fire. 3. After the cane was burned, Jose gathered the stalks in bundles. 4. Bundles of stalks were taken to the mill by railroad. 5. The growing of a crop of sugar cane is started by the planting of seeds. 6. Workers fertilize the young sugar-cane plants. 7. The soil does not need to be plowed before sugar cane is planted. 8. Sugar is made from the juice of the stalk of sugar-cane plants. (True: 1, 3, 4, 6, 8.)

2. *Reading for details* (Using pages 331–333)

1. What did the beetle borer injure? 2. Where does it lay its eggs? 3. What hatch out from the eggs? 4. How long did it take Mr. Muir to find a parasite of the beetle bug? 5. Where did Mr. Muir search for the parasite? 6. Where does the fly lay its eggs? 7. How do the maggots destroy the borer? 8. How did Mr. Muir first try to get the flies to Honolulu? 9. How were they packed?

3. *Drawing conclusions*

1. Do you think Mr. Muir's work made the raising of sugar

cane more profitable? Why? 2. Do you think Tala was more interested in the growing of sugar cane than Jose was? How do you know? 3. Do you think Mr. Pemberton was a brave man? Why do you think so? 4. What do you think made the head-hunters friendly to the expedition?

4. *Locating information*

Here is part of the index of a book:

> Sugar, annual production of, 12; food value in, 15; kinds of, 13; methods of manufacturing, 16–19; scarcity of in early days, 11; sources of, 14; uses of, 20–21.

On what pages in the book would you look to find answers to these questions?

1. How did people get sugar in colonial days? 2. From what sources is sugar obtained today? 3. What different kinds of sugar are made? 4. Is beet sugar made in the same way that cane sugar is made? 5. Is sugar used in the treatment of any disease?

5. *Selecting material read* (Using pages 319–330)

Find paragraphs that give answers to these questions:

1. How did the expedition travel in the jungle? 2. What results did the expedition get? 3. What dangers did the expedition face? 4. How did the natives act toward the expedition? 5. What was Mr. Pemberton's part in the expedition?

6. *Organizing ideas*

The second paragraph on page 316 tells three things that are done in making sugar from sugar cane. Pupils may fill in this outline:

MAKING SUGAR

I.
II.
III.

7. *Remembering ideas* (Using pages 331–336)

Find the ideas you would need to remember in order to tell someone of the difficulties Mr. Muir had in getting the flies to Honolulu.

V. Suggested Activities for the Unit as a Whole

1. Pupils may find out about occupational activities of people in the Hawaiian Islands other than fishing and raising sugar cane. Reports of the information they collect should be made to the class.

2. Find out more about volcanoes. What causes them? What volcanoes have done a great deal of damage? Where are the active volcanoes today? Some of the books listed on page 258 will be of help.

3. Find out more about the making of sugar. What different kinds are there? Where is cane sugar made? Where is beet sugar made? Are all kinds of sugar made in the same way? How does the production of sugar in Hawaii affect the beet sugar industry in the United States? What can be used as a substitute for sugar? What is the history of sugar? What are the bad effects of eating too much sugar?

4. Find out what scientists have done to discover ways of destroying pests that harm other important plants such as citrus fruits, cotton, wheat, and corn.

5. Find out what kind of a place the Hawaiian Islands would be in which to spend a vacation. How would you get there? Write to some of the steamship lines for pictures and pamphlets.

VI. A Written Test on Basal Concepts

1. Name two ways in which natives in the Hawaiian Islands catch fish.
2. What damage can an active volcano do?
3. What causes a volcano to erupt?
4. Name three things that are done in the planting and growing of sugar cane.

5. Name two things that are done in making sugar from sugar cane.
6. Name two things that scientists have done to improve the growing of sugar cane.
7. Who was Pele supposed to be?
8. How did the old native Hawaiians explain an eruption of a volcano?
9. Tell three things that happened in the making of the Hawaiian Islands.

UNIT FIVE

INVENTIONS CHANGE WAYS OF LIVING

I. Purpose of the Unit

To give children an understanding of some of the ways in which living today is different from what it was, and how the use of inventions and discoveries has made these changes possible.

II. Preparation for Reading the Unit

(*The Reading-Readiness Approach*)

A. Basal Concepts to be Developed

These concepts are developed through the use of pictures and informal discussion before the unit is read.

1. What inventions are
2. What *ways of living* means
3. How electric lights have made changes in living
4. What a streamlined train is
5. Dangers and hardships of travel by covered wagon
6. What some inventions are that have changed means of travel
7. How modern homes differ from pioneer homes
8. How inventions have helped to change some aspects of home life
9. How kitchens in pioneer homes were furnished
10. How modern kitchens are furnished
11. How pioneer houses were lighted and heated
12. How modern homes are heated
13. Modern means of communication
14. How telephones operate
15. How the telegraph operates
16. Inventions that improved communication
17. How rugs are swept in a modern way
18. What an old sewing machine was like
19. What a modern sewing machine is like
20. How clothes are washed in a modern way
21. How clothes are washed by hand

B. Oral Vocabulary to be Used and Understood During the Discussion

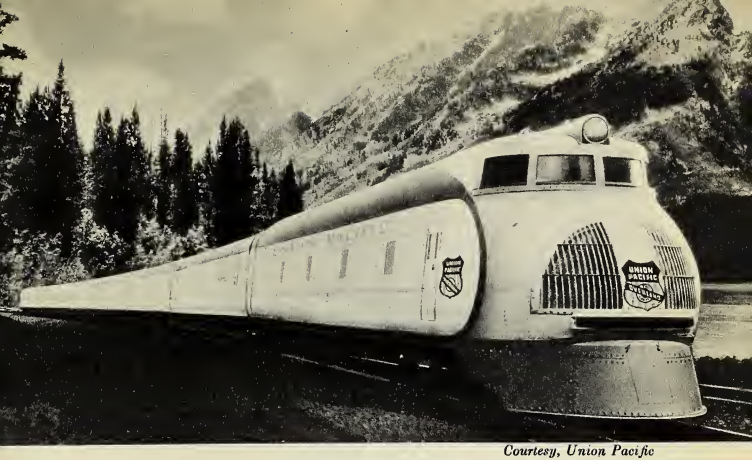
radio
candle
fireplace
indirect lighting
direct lighting
streamlined
Oregon
covered wagon
fording
log cabin
clapboards
modern
washing machine
motor
electricity
inventions
discoveries
recreation
signals
translate
reel
furnace
andirons
broiler
thermostat
telegraph
wireless
telephone
ear-phones
teletype
asbestos
sanitary
bootjack
vacuum sweeper
telephone operator
telephone exchange

C. Suggested Questions for Discussion

Introductory Discussion

1. What is the title of this unit? 2. What are inventions? (Any articles made by man that are the result of new ideas. Improvements made in processes. Sometimes the term invention is applied to a whole machine, many parts of which have been made as a result of new ideas. Use dictionary for other definitions.) 3. What do you think the term *ways of living* means? (As used in this unit it means human activities, or methods and manner in which people do various kinds of work, travel, or amuse themselves.) 4. Can you name some worthwhile inventions? (Examples are: radio, telephone, airplane, electric lights, automobile, moving pictures, pins, can-openers.) 5. What ways of living, or human activities, can you mention? (Examples are: cooking, cleaning house, traveling, playing games, sending messages.) 6. What invention do you see in the center of the picture on page 339? (Radio.) 7. What are the pupils in the picture doing? (Listening to the radio.) 8. Is listening to the radio an interesting thing to do? Why? What has this invention made it possible for us to do? 9. Can you think of any way in which the use of the radio has changed the way people live?

10. Look at the pictures on page 340. What invention made possible the improvement in lighting shown in the lower picture? (Electric light.) 11. In what ways do you think this invention has helped to change our ways of living? (Examples: people



Courtesy, Union Pacific

1. *A modern streamlined train on the way to Oregon.*

Ewing Galloway

2. *A wagon train on the Oregon Trail in the 1840's on the way to Oregon and California.*

Why were canvas tops, or hoods, put on the wagons? Why do the wagons have a barrel on the side? Why did pioneer wagon trains travel in a long line, or file?

P. & A. Photo

3. *Fording a river.*

Why, do you suppose, are the long logs tied to the side of the wagons? In what other ways are rivers crossed? What inventions have made these newer ways possible?

Gendreau

4. *A pioneer home in the Oregon country.*

5. *A pioneer schoolhouse rebuilt as it was in olden days.*

Pix

Of what are the home and the schoolhouse built? Where did the pioneers get the material for building their house? The shingles on the roof of the house were split from logs and are called clapboards. Do people still build log houses? Where?

How were pioneer houses heated?

Ewing Galloway

6. *A pioneer kitchen.*

7. *Old method of washing.*

Anne Shriber

How many of the things in the pioneer kitchen can you name? Which are used in kitchens today?

Where was the cooking done? Where was the bread baked?

In what ways have inventions made housework easier, pleasanter, and more sanitary?

Courtesy, Westinghouse Electric & Mfg. Co.

8. *A modern kitchen.*

9. *A modern washer.*

Courtesy, The Maytag Company

What conveniences do you find in a modern kitchen? What inventions make it possible to have them?

In how many different ways may heat and power be provided? Which method is used in your kitchen at home?

How is washing made easier by machine?

Gendreau

10. *A central heating plant in a modern home.*

11. *An old log house with chimney built of sticks and mud.*

Ewing Galloway

In what different ways are modern houses heated? What different kinds of fuel are used? How is the heat carried to the different rooms?

In olden days houses were heated by huge fireplaces. Why do we have fireplaces in houses today?

Gendreau

12. *An early sewing machine.*

Courtesy, Singer Sewing Machine Co.

13. *An electric machine.*

14. *An electric sweeper.*

Courtesy, The Hoover Company

The first sewing machines were turned by hand. How were later ones turned?

What advantages does sewing by machine have over hand sewing? What kind of sewing do we still do by hand?

Why is it more healthful to clean with a vacuum sweeper than with a broom?

Acme

15. *In a radio and telegraph office. Telegraph messages may be sent over wires or by wireless (radio).*

16. *Receiving a telegram.*

Ewing Galloway

The girl is pasting a message which has been printed on a strip of tape by the receiving machine at her right.

When was the telegraph invented? Before the telegraph was invented, how were messages sent?

G. A. Douglas, from Gendreau

17. *Telephone operators in a central office, or exchange.*

In what ways is the telephone different from the telegraph? How are they alike? For what do you use the telephone? For what do your mother and your father use it? The policemen, and other community helpers?

How does the use of the telephone make life safer and more pleasant?

Ewing Galloway

18. *Radio operator using a telegraph key to send radio-telegrams.*

19. *Receiving radio-telegrams by listening to signals.*

Ewing Galloway

From many radio stations, messages may be sent and received by telephone or by telegraph. In what places is it easier to send messages by radio than by wire?

What advantages does sending messages by radio have over sending them by wire?

read more, factories can operate 24 hours a day, we can have night sports, and well-lighted automobiles.) 12. What kind of electric lighting is shown in the lower picture? (Indirect. As the boy reads, the light is reflected upon his book from the ceiling of the room. The electric light does not shine directly on his book.) 13. Is the boy in the upper picture reading by direct or indirect lighting? (Direct. The candlelight falls directly upon his book.) 14. What is the meaning of indirect lighting as used on this page? (A method of lighting a room or an object by reflected rays of light.)

Picture No. 1. A modern streamlined train on the way to Oregon.

1. What is a streamlined train? (The most modern type of train. It is built in such a way that the air presses against it with the least possible force as the train moves rapidly along. The picture shows that the ends of the train are rounded, no smokestack, bell, humps, or corners stick out, and the spaces between the cars are enclosed.) 2. Do you know what the name of this train is? (City of Portland.) 3. Do you know where it travels? (Between Chicago, Illinois, and Portland, Oregon.) 4. Do you know why a streamlined train is better than an old-fashioned train? (Faster, more comfortable, safer.) 5. Do you know what some of the comforts of a streamlined train are? (Pupils who have traveled on such a train may tell of experiences. This unit will tell you.)

Picture No. 2. A wagon train on the Oregon Trail in the 1840's on the way to Oregon and California.

1. Why is part of the train going to the right and the other part to the left? (Wagons turning right are going to Oregon; those turning left are going to California.) 2. Why were canvas tops, or hoods, put on the wagons? (To give protection against weather.) 3. Why do the wagons have a barrel on the side? (To carry drinking water for travelers. At times it was shared with animals.) 4. What was the Oregon Trail? (A trail followed by travelers who moved by covered wagon from the east to settle in the new West.) 5. Why did people move to Oregon

and California? (To build new homes, to get new farms, to hunt for gold.) 6. What hardships and dangers did the travelers on the Oregon Trail face? (Illness, starvation, thirst, accidents, Indian attacks, crossing rivers, storms, freezing. This unit will tell you of some of them.) 7. Why did people make the trip by covered wagon? (No other way to go; no railroads.) 8. What was carried in the wagon? (People, supplies, household furnishings, and other belongings.) 9. Why did pioneer wagon trains travel in a long line or file? (Roads and trails were too narrow for wagons to travel side by side. Pioneers could not afford to build wide roads.)

Picture No. 3. Fording a river.

1. What dangers do you think pioneers faced as they crossed streams? (Being caught in the current and swept down the stream; the wagon box might float off the bottom of the wagon; drowning.) 2. Why were long logs fastened to the sides of the wagon? (To help the wagon float rather than sink deeply in the water.) 3. Did wagons always have to cross streams in this way? (No. Sometimes there were bridges and ferries.) 4. In what other ways are rivers crossed now? (Bridges, tunnels, ferries, trains, ships, automobiles.) 5. What inventions have made these newer ways possible? (The suspension bridge; waterproof cement; steam, gasoline, electric engines and motors; machines that can cut into solid rock to make tunnels; steam shovels; cranes, and derricks; and many others.)

Pictures Nos. 4 and 5. A pioneer home in the Oregon country, and a pioneer schoolhouse rebuilt as it was in olden days.

1. Of what are the home and the schoolhouse built? (The walls were made of logs. Roofs were covered with thin narrow strips of wood called clapboards that were split from logs. The floors were either hard dirt, flat stones, or split logs that were hewn smooth on the flat side.) 2. Where did the pioneers get the material for building their house? (Cut it from near-by forests.) 3. How was the fence in Picture No. 4 built? (The upright sticks, called pickets or poles, were split from logs. The

posts and long horizontal pieces of wood that support the pickets are the boles or trunks of small trees.) 4. How were pioneer houses heated? (Commonly by fireplaces.) 5. How were the houses lighted? (By candles and by fireplaces.) 6. Do people still build log houses? (Yes. In areas where suitable logs can be obtained. Such houses are often summer homes for people in the mountains or near lakes. Most houses are built of lumber, brick, or stone.)

Picture No. 6. A pioneer kitchen.

1. How many of the things in the picture can you name? (Besides the bed, bench, chairs, fireplace, cupboard, dishes, pots, skillets, fire tongs, poker, and andirons, there are several uncommon articles. At the right of the cupboard is a reel upon which skeins of thread were wound as they were spun. At the right of the reel is a long-handled waffle iron. Above the broom hangs a turkey-wing duster and fan. The duster was used to clean the hearthstone where some foods such as apples and corn were baked. Above the turkey wing and on the mantelpiece is a butter mold in which soft fresh butter was placed to give it shape. At the left side of the fireplace is a broiler, used in cooking meat and fowl. On the floor in front of the chair is a bootjack. A man used a bootjack to help him pull off his boots. In removing his left boot, the pioneer placed his right foot on the bootjack, and then caught the heel of his left boot in the V-shaped notch in the end of the jack and pulled his foot out of the boot.) 2. Which of these articles are used in kitchens today?

3. Where was the cooking in a pioneer kitchen done? (In the fireplace.) 4. Where was bread baked? (Usually in the kind of skillet shown near the right side of the fireplace. Sometimes the dough was placed on a cleanly swept hearthstone and left until a crust had baked upon it. The bread was then covered with ashes and hot embers and left to finish baking.) 5. How were the chairs, bench, cupboard, and bootjack made? (Of wood with hand tools.) 6. In what ways have inventions made housework easier? (This unit will tell you some of them.)

Picture No. 7. Old method of washing.

1. How are clothes washed in this way? (Soaked for a few minutes in water. They are then soaped and rubbed on a washboard. Sometimes clothes are boiled in soapy water after they are rubbed on the washboard.) 2. What utensils is the woman using? (Tub, washboard.) 3. Do you think this method of washing is an easy one? Why?

Picture No. 8. A modern kitchen.

1. What conveniences do you find in a modern kitchen? (Electric stoves with heat regulators, running hot and cold water, electric mixer, mechanical refrigerator, washable paint on walls and wood, hood above stove to carry off fumes, electric dishwashers, and many other tools.) 2. What inventions make it possible to have them? (Discovery of gas as a fuel, discovery of electricity, invention of the modern gas or electric stove, thermostat, electric motor, enamel, aluminum, and others.) 3. In how many different ways may heat and power be provided? (Wood, coal, oil, gasoline, gas, and electricity are commonly used for heat. Electricity is also used for power.) 4. Which method is used in your home? 5. In how many ways can refrigeration be provided? (By electricity, gas, kerosene, and ice.)

Picture No. 9. A modern washer.

1. Compare this method of washing with the one shown in Picture No. 7. Which method is easier? (The modern method.) 2. How is washing made easier by the machine? (The machine washes dirt from the clothing, and wrings or squeezes the water from them. It takes a great deal of labor when these things are done by hand.) 3. How is the dirt removed from the clothing? (Paddles or rollers in the machine move the clothing around in soapy water until the dirt is removed from them.) 4. How do washing machines remove the water from the clothing after it is washed? (In one kind of machine the wet clothes are passed between turning rubber rollers. As the clothes move along, the rollers squeeze most of the water from them. Some machines have a cylinder into which the wet clothes are placed. The

cylinder is then turned so rapidly that most of the water is thrown out of them.) 5. Which method of removing water from clothes is being used in the picture? (Rollers.) 6. What kind of power does this machine use? (Electricity. The motor is below the body of the washer and between the machine's legs.)

Picture No. 10. A central heating plant in a modern home.

1. What is a central heating plant? (A place where the heat used by a whole building or a group of buildings is produced.) 2. In what other ways may a home be heated? (Separate stoves, fireplaces.) 3. In what different ways are modern homes heated? (Hot air, hot water, steam.) 4. What different kinds of fuel are used? (Wood, coal, oil, gas, electricity.) 5. What produces the heat in the heating plant shown in the picture? (Electricity.)

6. How is the heat carried to the different rooms in a house from the central heating plant? (In one of three ways. In some furnaces, the upper part contains water. This water is heated and circulates back and forth through pipes between the furnace and the radiators in the different rooms of the house. As the water is heated in the furnace, it flows through the pipes and radiators, giving off heat as it goes. As it becomes cooled in the radiators, it flows back to the furnace to be reheated. In other systems some of the water is turned into steam which passes through pipes to the radiators. In many houses heat is carried to the different rooms by air which is heated in the furnace and then circulated through the rooms of the house by means of large pipes that connect the furnace and the rooms.) 7. Where is the furnace in the picture? (Right-hand side.) 8. Why are the pipes covered with asbestos? (Prevents pipes from giving off heat that is not needed in the basement.)

Picture No. 11. An old log house with chimney built of sticks and mud.

1. How were houses heated in olden days? (Read legend.) 2. Why did not the sticks in the chimney catch fire? (Covered with mud.) 3. Why do we have fireplaces today? (Pleasure and beauty of the open fireplace.)

Pictures Nos. 12 and 13. An early sewing machine, and an electric machine.

1. How were the first sewing machines turned? (Read legend.) 2. How were later ones turned? (By treadles.) 3. How are the most modern machines turned? (By electric motors.) 4. What advantage does sewing by machine have over sewing by hand? (Faster; requires less energy.) 5. What kind of sewing do people still do by hand? (Fancy needlework, darning, sewing on buttons, basting, quilting.)

Picture No. 14. An electric sweeper.

1. Why is it more healthful to clean with a vacuum sweeper than with a broom? (With a vacuum sweeper the dirt and dust are sucked into a bag on the sweeper, rather than being swept into the air. When sweeping with a broom, the person sweeping breathes the dust-laden air. This is not healthful.) 2. What runs the vacuum sweeper? (An electric motor.) 3. Where is the bag into which the dust is sucked by air? (Below the sweeper handle.) 4. Can a rug be cleaned more easily and better with a broom or with an electric sweeper? (With an electric sweeper.)

Picture No. 15. In a radio and telegraph office. Telegraph messages may be sent over wires or by wireless (radio).

1. What is a telegraph? (A group of machines used for sending and receiving signals over a wire by the use of electricity. By the use of various devices many kinds of signals can be sent by telegraph.) 2. What is the man in the picture doing? (A telegraph instrument has just received a message which it automatically wrote upon a narrow strip of paper which extends across the man's typewriter. The message is written in signals which only a telegraph operator can read. The man is writing the meaning of the signals.) 3. How may telegraph messages be sent long distances without the use of wires? (Telegraph signals are sent through the air in the form of radio waves.) 4. Why is the man wearing ear-phones? (To hear signals that are sent to him by radio.)

5. Why does he wear the ear-phones in front of his ears? (No

message is coming through, but he keeps the phones near enough to hear the special signal that calls his station by radio.) 6. What would he do if he were to receive a message by wireless telegraph or radio? (He would move the ear-phones to his ears, turn to the typewriter at his left and write the message as it reached him.) 7. What would happen to the message he is now writing if he turned away? (The telegraph instrument would continue writing and the narrow strip of paper would be rolled upon the large reel at his left. Later he would unroll the paper and continue copying the message.)

Picture No. 16. Receiving a telegram.

1. What is the girl in the picture doing? (Read legend.) 2. What is the machine at her right called? (Teletype.) 3. How does it work? (Writes telegraphic messages in words on paper tape. Signals do not have to be translated and written on a typewriter.) 4. When was the telegraph invented? (First message was sent between Baltimore, Maryland, and Washington, D.C., on May 24, 1844. Samuel Morse is usually considered to be the inventor, but Joseph Henry claimed that he invented the machine. Morse first demonstrated his telegraph in September, 1837.) 5. How were messages sent before the telegraph was invented? (By runners, carrier pigeons, special messengers, and regular mail.)

Picture No. 17. Telephone operators in a central office, or exchange.

1. In what ways is the telephone different from the telegraph? (People may talk with one another over a telephone. The telephone receives sounds, causes them to change an electric current, sends the changed current along a wire, and then uses the current to reproduce the sounds. Conversation cannot be held over a telegraph. The telegraph receives, carries, and reproduces electrical signals.) 2. How are they alike? (Both require wires; both use electricity; both are rapid means of communication.) 3. For what do you and your family use the telephone? 4. For what do policemen and other community

helpers use it? (Policemen use it to receive orders and information about law enforcement, and to report work they do. Firemen use the telephone to receive quickly reports of fires. Merchants use the telephone in buying and selling goods.) 5. What are the operators in this telephone exchange doing? (Helping people who wish to talk to someone on the telephone get the parties they want.)

6. What are the cords in the picture used for? (Every telephone is connected by wires to a telephone exchange. The operators use the cords to connect the wires of two different telephone lines to make it possible for people on separate lines to talk together.) 7. Of what use are the clocks? (Operators use the clocks to measure time that a person uses in talking on a call that is paid for according to the length of time it takes.) 8. How does the use of the telephone make life safer and more pleasant?

Pictures Nos. 18 and 19. Radio operator using a key to send radio telegrams, and receiving radio telegrams by listening to signals.

1. How does the operator send radio telegrams? (As the operator presses the telegraph key, radio waves go out from the station. By pressing and releasing the key, the operator can send signals that receiving operators can translate into messages. Radio signals travel through the air a little faster than 186,000 miles per second.) 2. Why does the operator wear ear-phones as he sends messages? (To hear signals he himself is sending and to hear any signals another operator may send to him.) 3. In what places is it easier to send messages by radio than by telegraph? (On ships and airplanes.) 4. What advantages does sending messages by radio have over sending them by wire? (Radio makes it possible to send messages where telegraph wires do not go.)

D. Suggested Group Activities for Optional Use

1. Each pupil may select an invention for individual study. He may report to the class the information he discovers. The following outline may help:

a. Name and description of the invention

b. Name of inventor

c. Date of invention
d. How the invention came to be made
e. How the invention has helped us

2. Try to get someone who knows to tell your class how telegrams are sent and received. Perhaps you could visit a telegraph office.

3. Find out the story of the invention of the telephone. What difficulties were met in its invention?

4. Make a list of the ways in which your family uses an automobile. Discuss ways in which you think the use of the automobile makes you live differently from the way you would if you did not have it.

5. Discuss ways in which the radio, the moving picture, the central heating plant, and electricity make it possible for you to live differently from the way you would if you did not have them.

6. Pupils may find out what conveniences they have that their parents did not have. Discuss the advantages that these conveniences have brought to us.

7. Pupils may begin the construction of a portfolio or record book on inventors and inventions. Pictures, clippings, and original writings, prepared after study, may make up the contents of this book.

III. Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills

A. Order of Selections in the Unit

1. New Ways and Old Ways, pages 341–348
2. On to Oregon, and The Oregon Trail, pages 349–353
3. How Calico Saved a Farm, pages 354–372
4. One Hundred Years Ago, and Philander's Fiddle, pages 374–393
5. Skip to My Lou, pages 395–396
6. The Runner Who Told of Victory, pages 397–408
7. The Pony Express, The Pony Rider, and Other Great Discoveries, pages 409–413

B. Classification of the Selections

The following chart indicates which selections are best suited for use in developing a given reading habit or skill:

Reading Habits and Skills	Selections						
	1	2	3	4	5	6	7
1. Getting the main ideas	x		x	x		x	
2. Reading for details	x		x	x		x	
3. Drawing conclusions	x		x	x		x	
4. Locating information				x			
5. Selecting material read	x		x	x		x	
6. Organizing ideas	x		x	x		x	
7. Remembering ideas	x		x	x		x	
8. Oral reading		x		x	x		x

IV. Teaching the Individual Selections

NEW WAYS AND OLD WAYS

pages 341-348

A. Introducing the Story

This story may be introduced by means of an informal discussion. Use the following questions:

1. Have you ever traveled on a modern train? What was it like? 2. Have you ever seen people traveling in a covered wagon? Have you heard stories of people traveling in a covered wagon? What do you think such traveling was like? 3. In what ways do you think traveling on a modern train is different from traveling in a covered wagon? 4. In what ways do you think modern homes are different from the homes in which people lived at the time of George Washington? Do you think housework is easier now? Do you think we have more conveniences in our homes? Why?

B. Introductory Reading of the Story

The story should be read silently. A suggested purpose is: *In what ways are travel and home life now more convenient than they were in the days when Mr. Thompson's grandfather lived?*

The following questions are suggested for discussion subsequent to the reading:

Page 341. 1. Who were traveling on the train? Where were they going? 2. What was Mr. Thompson thinking about? 3. How fast was the train going?

Pages 342-343. 1. What were some of the conveniences in the train? 2. Why did Jim's great-grandfather have to go to Oregon by covered wagon? What were some of the difficulties he faced?

Pages 344-345. What were some of the differences between the great-grandfather's trip and the one that Jim was taking?

Pages 346-347. 1. What are some of the conveniences of our modern homes? 2. How were houses heated in colonial days? How was the cooking done? 3. What other conveniences do we have in our homes that the colonists did not have?

Page 348. 1. What has made our modern means of travel and our household conveniences possible? 2. What were some of these important inventions and discoveries?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. In what ways is travel better than it was? Is it faster? Is it safer? Is it more comfortable? 2. Do you think the fact that housework has been made easier affects the way in which we live? How? Do we have more time for leisure? What can we do with this increased leisure time?

Other Activities: 1. Collect pictures of modern machines used in the home. 2. Collect pictures of streamlined trains. Most of the railroads will send them free of charge. 3. Find out who made some of the most important discoveries and inventions that have changed travel and home life. How were these inventions made?

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. The Thompson family was traveling to California. 2. The Thompsons were traveling faster than Mr. Thompson's grandfather traveled. 3. The Thompsons traveled in greater comfort than Mr. Thompson's grandfather did. 4. Mr. Thompson's grandfather traveled with more safety than the Thompsons did. 5. Mr. Thompson's grandfather traveled to Oregon on horseback. 6. Traveling by covered wagon had more than one danger. 7. In modern homes, much of the work is done by machines. 8. Colonial homes were heated by central heating plants. 9. Inventions have made housework easier. (True: 2, 3, 6, 7, 9.)

2. *Reading for details* (Using pages 345–348)

1. What fuel does a furnace in a modern house use? 2. What does an air-conditioner do? 3. Why were few rooms heated in a colonial house? 4. Where was cooking done in colonial times? 5. How did the colonists light their homes? 6. What did the invention of the steam engine make possible? 7. How necessary are machines for us today? 8. What has the invention of the gasoline engine made possible?

3. *Drawing conclusions*

1. Do you think it would take more time or less time to send a letter from Chicago to Oregon now than it did one hundred years ago? How do you know? 2. Do you think the increase in speed of travel has made it easier to carry on business? Why? 3. Did Mr. Thompson's grandfather make the trip by covered wagon because it was cheaper to travel that way? How do you know? 4. Does a housewife today have more time for reading than a colonial housewife had? How do you know? 5. Do you think that traveling will become better than it is now? What makes you think so?

4. *Selecting material read*

Find paragraphs that give answers to these questions:

1. In what ways is cooking easier today than it was in colonial times? 2. What dangers and difficulties did people face who traveled by covered wagon? 3. In what ways are houses more comfortable now than they were in colonial times? 4. What has made it possible to increase the speed and comfort of travel? 5. In what ways is travel by modern trains made comfortable?

5. *Organizing ideas*

The last paragraph on page 347 and the first paragraph on page 348 tell about some of the inventions and discoveries that have improved travel and conditions in the home. Pupils may fill in this outline:

INVENTIONS AND DISCOVERIES AFFECTING TRAVEL AND HOME LIFE

I. The steam engine
II.
III.
IV.
V.
VI.

6. *Remembering ideas*

Find ideas you would need to remember in order to tell someone how housework is easier than it was in colonial times.

ON TO OREGON
THE OREGON TRAIL
pages 349-353

Some pupil who reads well at sight may read page 349 aloud. Allow pupils to discuss this material if they wish. The poem may be read aloud by individual pupils. The

class may wish to read all or parts of it in concert. Give opportunity for pupils to raise questions and to make comments about the poem, but do not quiz. Encourage pupils to read aloud other poems they may find about the Oregon country or about travel by covered wagon.

HOW CALICO SAVED A FARM

pages 354-372

A. Introducing the Story

Raise and discuss the following questions:

1. About 1840 people were moving from Ohio and other eastern states into Iowa and other parts of the middle west. Why do you think they moved? 2. How do you think these people made the trip? 3. What difficulties do you think they would face in traveling? 4. Do you think that pioneers were more careful about helping other travelers in trouble than automobile travelers are now? Why?

B. Introductory Reading of the Story

This story should be read silently. A suggested purpose is: *How did Calico save the farm?*

For some classes, the reading of the story should be done in two divisions. The first section may end with the first paragraph on page 365. A suitable purpose for silent reading of this material is: *What difficulties did the family meet in the first part of their trip?*

The following questions may be used for discussion:

Pages 354-355. 1. Who was Calico? 2. Where were the family going the next day? Why were they moving? 3. What was to become of Calico? Why?

Pages 356-357. 1. What preparations had the Lane family made for the trip? 2. How was the trip to be made? 3. How long did they expect the trip to take?

Pages 358-359. 1. What was done in the morning before the family started on the trip? 2. How did the first day's travel go?

Pages 360-361. 1. Where did the family camp the first night? 2. What things were done in camp? 3. What surprise did Lucinda find in the wagon? What did her father say about it? 4. How far had the family traveled the first day? 5. Where did the members of the family sleep?

Pages 362-363. 1. Why was the second day's travel not so pleasant? 2. What happened to the wagon box in the stream?

Page 364. 1. How were the wagon box and the family saved? 2. What work had to be done before they could go on?

The second division begins with the second paragraph on page 365. A suitable purpose for silent reading of this material is: *How did Father get to Uncle Pete's in time?*

The following questions may be used for discussion:

Page 365. How did the family cross the Wabash River?

Pages 366-367. 1. Why did the family camp for five days in Illinois? 2. What happened when the wagon was stuck in the mud?

Pages 368-369. How did Father repay Mr. Jones for his help?

Pages 370-371. 1. Why did Father and Nat drive all night? 2. When did the family arrive at the Mississippi River? 3. Why were they not able to get across?

Page 372. How did Calico save the farm?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. In what ways is the traveling by covered wagon that the Lanes did different from the way one would travel from Ohio to Iowa today? 2. What inventions have helped to make travel better than it was in 1840? 3. What dangers did the Lanes face during their trip?

Other Activities: 1. Make a list of the difficulties of travel by covered wagon from Ohio to Iowa in 1840. 2. Find other short stories about travel by covered wagon and read them aloud to your classmates. 3. If you can, find someone in your commun-

ity who has made a trip by covered wagon. Ask him to tell your class about his experiences.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. The Lanes were eager to get to Iowa because of bad weather. 2. The family packed everything it owned into the covered wagon. 3. Horses were used to pull the wagon. 4. The Lanes took no livestock with them other than the oxen. 5. Calico had slipped into the wagon when no one knew it. 6. The family had both hot weather and cold weather on the trip. 7. There was no difficulty in getting the wagon across streams. 8. All streams were crossed on a ferryboat. 9. The Lanes got into difficulty when their wagon was stuck in the mud. (True: 5, 6, 9.)

2. *Reading for details* (Using pages 355–357)

1. What was another name for a covered wagon? 2. When had Father first talked to the family about moving to Iowa? 3. How much was Father to pay for the farm in Iowa? 4. When did he have to be there to buy it? 5. When did Father say they would need to start? 6. For how long had the family been getting ready to move? 7. What had they done with most of their furniture? 8. What did Lucinda do to help load the wagon? 9. Where did Father hang the bucket of tar?

3. *Drawing Conclusions*

1. Do you think traveling by covered wagon was uncomfortable? Why? 2. Do you think the Lanes traveled with more safety than people on modern trains do today? 3. Do you think the Lanes traveled more than 800 miles from Ohio to Iowa? What makes you think so? 4. Why do you think the Lanes took their cow and chickens along? 5. Do you think travelers in 1840 helped one another as they met along the road? What makes you think so?

4. *Selecting material read*

Find paragraphs that give answers to these questions:

1. What did the Lanes take with them? 2. In what states did they travel? 3. What things made them lose time? 4. How did they cross streams? 5. What things did Nat do to help?

5. *Organizing ideas*

Arrange these events in the order that they happened:

1. Father crossed the Mississippi River in a canoe. 2. A man asked for Calico. 3. The wagon was packed in Ohio. 4. A snow storm came. 5. The wagon box floated off the running gear. 6. Father and Nat helped Mr. Jones. 7. The wagon was stuck in the mud. 8. Father put shoes on the oxen's feet. (Correct order: 3, 5, 8, 7, 6, 4, 2, 1.)

6. *Remembering ideas*

Find the ideas you would need to remember to tell someone what dangers people faced in traveling by covered wagon.

ONE HUNDRED YEARS AGO
PHILANDER'S FIDDLE

pages 374-393

A. Introducing the Stories

Raise and discuss the following questions:

1. Have you ever attended a family reunion for your grandparents? Have you ever heard very old people talk about the way they lived when they were young? 2. What were some of the customs of people who lived in our country about 80 years ago? What work did they do in their homes? How did they entertain themselves? (Perhaps these stories will help you answer these questions.)

B. Introductory Reading of the Stories

Some pupil who reads well may read pages 374–375 aloud. Allow time for discussion if pupils wish it.

Philander's Fiddle should be read in two parts. The first division ends on page 383. A suitable purpose for silent reading of this material is: *How did Philander Bell's family build their house?*

The following questions are suggested for discussion:

Pages 376-377. 1. Where did Philander Bell live? When did he come to Iowa? 2. Why did Philander do the housework? 3. How had he made his fiddle? 4. What is a "house raising"? What happened when Mrs. Bell raised her house? How was the food cooked?

Pages 378-379. 1. What food did they have for dinner at the house raising? 2. How was the house built?

Pages 380-381. 1. How did the pioneers entertain themselves at the house raising? 2. What was a "house warming"? How did the people dress? 3. What entertainment did they have at the house warming?

Page 382. 1. What did the pioneers do on the Fourth of July? 2. What did the stranger think of Philander?

The second division begins on page 383. A suggested purpose for silent reading of this material is: *In what different ways did the pioneers have fun?*

The following questions are suggested for discussion:

Page 383. 1. For what is flax used? 2. What is "retting"?

Pages 384-385. 1. Why was the flax hackled? 2. What did the pioneer women have to do to make clothes? 3. What did Philander do to prepare food for winter?

Pages 386-387. 1. Why did the pioneers save fat? 2. How did they make lye? 3. How did they make soap? 4. How did they make candles?

Pages 388-389. 1. What did the pioneers use in the place of sugar? 2. How did the pioneer women entertain themselves? 3. What was a log rolling?

Pages 390-391. 1. What was a husking bee? 2. What was

a circular wolf hunt? 3. What happened at the Bell house on Christmas Day?

Pages 392-393. 1. What did the stranger bring to Philander? 2. Why do you think the people felt glad about it?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. In what ways did the pioneers entertain themselves? Which of these ways do we use today? 2. What different kinds of work did the pioneers do around the house? Which of these things do we do today? 3. In what ways do you think the leisure and the work of people at home has changed?

Other Activities: 1. Collect pictures of homes and activities of pioneer people. 2. Find and read aloud stories about the home life of pioneers. 3. Find out what kind of cooking utensils and furniture the pioneers used.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. The Bells were pioneers in Iowa. 2. Philander Bell did much of the work around the house. 3. The pioneers hired carpenters to build their houses. 4. The pioneers bought their clothing at clothing stores. 5. Most of the pioneers' leisure time was used for reading. 6. The pioneers prepared and stored food for winter. 7. Pioneer men had no way of entertaining themselves. 8. The pioneers did not like to play. (True: 1, 2, 6.)

2. *Reading for details* (Using pages 378–382)

1. How did Philander get the bread to brown evenly? 2. How high was the house built up before the gables were put on? 3. What was "chinking"? 4. How were the shingles made? 5. What were used in the place of nails? 6. What was used instead of glass for windows? 7. Of what were the door hinges made? 8. Of what was the floor made? 9. Of what were the women's dresses made? 10. Where was the Fourth of July

picnic held? 11. What sports did the people have at the picnic?

3. *Drawing conclusions*

1. Did pioneer housewives work harder than most housewives work today? How do you know? 2. Do you think the pioneers had more ways of getting entertainment than we have today? What makes you think so? 3. Did Philander's neighbors think it was not right for him to spend his time at housework? How do you know? 4. Do you think the pioneers were wasteful of anything? Of what? (Timber in log rolling.) 5. What do you think the pioneers used for fuel?

4. *Locating information*

Here is part of the index of a book:

> Iowa, area, 14; as a territory, 16–18; becomes a state, 19; discovery of, 13; first settlement, 15; first schools, 19; Indians, 20–23; location, 14; pioneer life in, 15–22; products, 23–25.

On what pages in the book would you look to find answers to these questions:

1. What are the chief crops in Iowa? 2. Where did the pioneers first settle in Iowa? 3. What trouble did the settlers have with Indians? 4. Where was the first college established? 5. In what part of the United States is Iowa?

5. *Selecting material read*

Find sentences and paragraphs that give answers to these questions:

1. What foods did the pioneers have? 2. What hunting did the pioneers do? 3. What different kinds of work did the women do? 4. What difficult things were done in building a house? 5. In what ways did the pioneers use lye?

6. *Organizing ideas* (Using pages 388–391)
Have pupils complete this skeleton outline:

SOME WAYS IN WHICH THE PIONEERS AMUSED THEMSELVES

I. Quilting bees	V.
II.	VI. Circular wolf hunts
III.	VII.
IV.	VIII.

7. *Remembering ideas*
Find the ideas you would need to remember if you told someone how the pioneers helped each other.

SKIP TO MY LOU
pages 395-396

Some pupil may read page 395 orally. Pupils should enjoy learning to sing the song and to play the game. Encourage pupils to get other pioneer songs or play party games, such as those mentioned in the previous story, and to learn them.

THE RUNNER WHO TOLD OF VICTORY
pages 397-408

A. Introducing the Story

Raise and discuss the following questions:

1. When you want to get a message to someone who lives a hundred miles from you, how do you do it? (Mail, telephone, telegraph, radio.) 2. Do you know how people sent messages to places miles away before there were trains and airplanes to carry mail, or before there were telephones or telegrams or radio? (Perhaps this story will help you to answer this question.)

B. Introductory Reading of the Story

This selection should be read silently. Suitable purposes

are: 1. *How did Phidippides save his country?* 2. *How were messages sent in the time of ancient Greece?*

The following questions may be used for discussion:

Page 397. What were the children excited about?

Pages 398-399. 1. Why was Phidippides famous? 2. What work did he do? 3. Why were runners used to take messages to Corinth or Sparta? 4. What army was making ready to attack Greece?

Pages 400-401. 1. What duty was Phidippides given to perform? 2. How far away was Sparta?

Pages 402-403. 1. How long did it take Phidippides to get to Sparta? 2. What message did he give to the Assembly there? 3. Why did the Spartans refuse to send help? 4. What did Phidippides find when he reached home?

Pages 404-405. 1. What did Phidippides do during the battle? 2. Why was Phidippides sent back to Athens?

Pages 406-408. 1. How did Phidippides run to Athens? 2. What do you think killed him? 3. Where did the Marathon Race get its name?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. In what way was sending messages in ancient Greece different from sending messages today? 2. Of what help do you think it is to have speedier means of sending messages?

Other Activities: 1. Find out other ways that were used to send messages before the telephone and the telegraph were invented, and before there was such a thing as mail. 2. Find stories that tell about old ways of sending messages. Read them aloud to your classmates.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. Phidippides had made his fame as an athlete. 2. Phidippides was a runner for the government of Athens. 3. The Greeks

were making ready to invade Persia. 4. The battle told about in the story was the battle of Marathon. 5. Phidippides ran from Athens to Corinth to get help. 6. The Spartans came to help Athens immediately. 7. The battle was won by the Persians. 8. Phidippides lost his life serving his country. (True: 1, 2, 4, 8.)

2. *Reading for details* (Using pages 397–400)

1. Why was everyone proud of Phidippides? 2. What had Phidippides done in the Olympic Games that very few athletes ever did? 3. What was Phidippides given for his victories in the Games? 4. Why was the mail in Greece carried on foot? 5. What did Phidippides have to do with the training school? 6. Where did the runners carry written messages? 7. What army was marching against Greece? 8. Why did Phidippides not need to carry a written message to Sparta?

3. *Drawing conclusions*

1. Why did Phidippides have to make the run to Sparta so rapidly? 2. Do you think the Greeks were admirers of physical strength? Why do you think so? 3. Were the Greeks brave people? How do you know? 4. Why may it be important for messages to be delivered very quickly? 5. Why do you think Phidippides did not rest longer at the farmer's house?

4. *Selecting material read*

Find the paragraphs that give answers to these questions:

1. What were the Olympic Games? 2. What kind of treatment did Phidippides get in Sparta? 3. How did the Grecian soldiers dress? 4. What did Phidippides do during the battle? 5. How did Phidippides run?

5. *Organizing ideas*

Arrange these events in the order that they happened:

1. Phidippides stopped at the farmer's house. 2. Phidippides ran from the battlefield to Athens. 3. Callimachus gave Phidippides the message. 4. Phidippides gave his message to the Spar-

tans. 5. Phidippides started on his journey to Sparta. 6. The Greek army attacked the Persians. (Correct order: 3, 5, 1, 4, 6, 2.)

6. *Remembering ideas*

Find the ideas you would need to remember in order to tell someone how the battle was fought.

THE PONY EXPRESS
THE PONY RIDER
OTHER GREAT DISCOVERIES

pages 409-413

Some pupil may read page 409. Give pupils opportunity to tell what they know about the pony express and to ask questions.

Individual pupils may read the poem aloud. The class may wish to read it in concert. Allow opportunity for discussion, but do not quiz on the poem. Encourage pupils to read aloud other poems they have found about the pony express.

Some pupil may read page 413 aloud. Allow opportunity for discussion.

V. Suggested Activities for the Unit as a Whole

1. Collect and read stories aloud about travel by covered wagon, pioneer home life, and the pony express.

2. Find out more about the way in which the government was able to get people to settle the Oregon country.

3. By writing to manufacturers of electrical machines or by searching in catalogues, find out what the different machines are that save time and labor in housework.

4. Individual pupils or groups of pupils may make special reports on the latest developments in different means of communication. Information collected should be reported to the class.

5. Pupils may make special reports on our most modern means of travel other than streamlined trains.

6. Find out who the people were who made some of the most important inventions which have changed the way in which we live. How did they make their discoveries and inventions. Pupils who gather this information should report to the class.

7. Make a chart showing the history of means of transportation from the earliest times up to the present. Note particularly the outstanding inventions that have made travel speedier, more comfortable, and safer.

8. If possible, secure an old pioneer spinning wheel, and find someone in the community to demonstrate how it was used.

9. If possible make soap as the pioneers did it. You may need more detailed directions than are given in the text. Use great care in handling the lye.

10. Have a party and play some of the games that used to be played by the pioneers.

VI. A Written Test on Basal Concepts

1. Name three ways in which travel by streamlined trains is better than travel by covered wagon.
2. Name three difficulties that travelers by covered wagon had to face.
3. Name four important kinds of work that the pioneers did by hand that are now done for us by machines.
4. Name three inventions that have made travel better than it was.
5. Tell four things the pioneers did in their leisure time.
6. What do you think is a big difference between the way the pioneers secured entertainment and the way we get it today?
7. Tell three ways in which the homes of the pioneers were different from our homes.
8. Name three foods that the pioneers made which we usually buy at stores.
9. Name four means of sending messages that we have today but that the ancient Greeks did not have.

10. Name three inventions that have made communication more rapid.
11. Name three inventions that have made housework easier.
12. Tell one way in which you think the use of inventions and discoveries has helped us.

UNIT SIX

WORKING TOGETHER

I. Purpose of the Unit

To get children to understand that taking an active part in solving the problems of any group to which one belongs is one of the characteristics of the good citizen, and to stimulate the pupil to do something about the problems which his groups meet.

II. Preparation for Reading the Unit

(*The Reading-Readiness Approach*)

A. Basal Concepts to be Developed

These concepts are developed through the use of the pictures and informal discussion before the unit is read.

1. What *working together* means
2. What public parks, playgrounds, libraries, and clinics are.
3. How parks, playgrounds, libraries, and clinics are supported
4. Why libraries are valuable
5. What health centers are
6. Why clinics are valuable
7. How children's eyes, ears, and teeth are cared for in a health center or clinic
8. What Four-H Clubs are
9. What Four-H Clubs do for boys and girls
10. What summer camps are
11. What boys and girls learn at summer camps
12. How boys' and girls' camps are supported
13. How playgrounds and group games help boys and girls to become good citizens
14. Why public parks and playgrounds are valuable

B. Oral Vocabulary to be Used and Understood During the Discussion

playground	community	nurse	handicrafts
swimming	clinic	dental care	equipment
tennis	health center	supervise	citizen
baseball	treatment	club	group
library	doctor	camp	

C. Suggested Questions for Discussion

Introductory Discussion

1. What is the title of the unit? (*Working Together.*) 2. What do you think it means? (Doing things together in order to solve a problem that the group meets.) 3. What do you think the group of children in the picture is going to do? 4. To what groups do you belong? (Possibilities are the family, a club, class at school, entire school, entire community or town, church, state, nation.) 5. Do you know of anyone in one of your groups who helped the group to get something done? What did he do?

6. Look at the picture on page 416. What do you see in it? (Swimming pool, tennis courts, part of a basketball court, baseball field, a bird house.) 7. Where do you think these things are? (On the edge of a town.) 8. Why do you think the town made them? (To provide places for people to play and to have a good time.) 9. How do you think the town got them? Who paid for the land? Who paid for the equipment? (Perhaps money was supplied by taxation. Perhaps someone gave the land to the town for the playgrounds. Perhaps someone gave the money for the equipment. Perhaps groups of people earned the money to buy the land and the equipment.)

Picture No. 1. Children's room in a public library.

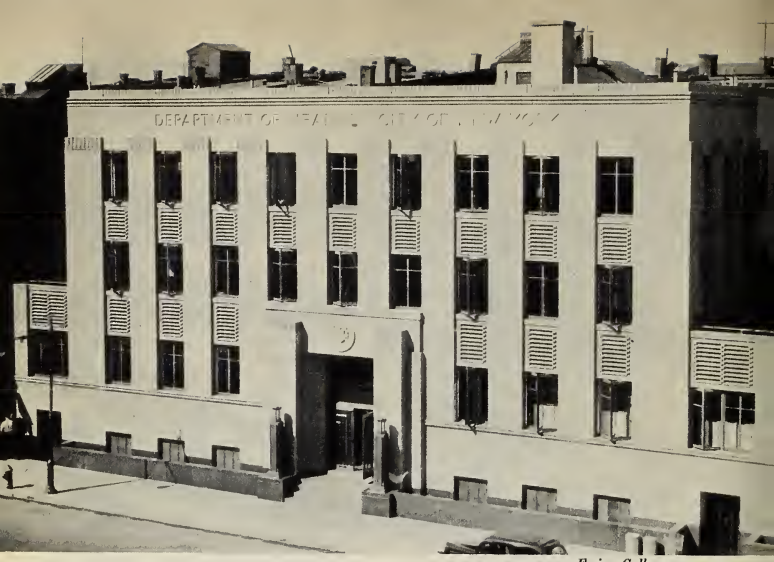
1. What are the children doing at the tables? (Reading.) 2. What are the children doing at the desks? (Having a record made of books they want to take out.) 3. Do the children own the books that they want to take out? (No. The books belong to the library. They are loaned to people for several days.) 4. How does a community pay for a library? (In various ways. Inquire locally.) 5. Would you rather live in a community where there is a library than in one where there is none? Why? 6. In what ways do public playgrounds and libraries help communities? (Playgrounds give children room for play which is safer than streets. Playgrounds have equipment that families could not afford to buy for their own children. Supervisors on playgrounds often teach children how to play good games. Pub-

Ewing Galloway

1. *Children's room in a public library.*

In which community would you rather live, one that has a library or one that hasn't? Why?

To equip and run a public library costs money. How does a community pay for such a library? In what ways do public playgrounds and public libraries help a community?



Ewing Galloway

2. *A community health center, or clinic.*

3. *Taking care of eyes in a health center.*

Acme

Most cities and towns have public health centers, or clinics, where people may receive expert advice and help for little or no cost. Why should people seek help and advice on health? To whom can you go for advice?

Acme

4. *Treating the ear at a health clinic.*

5. *Dental care at a clinic.*

Acme

Why is it necessary for children to keep their eyes, ears, and teeth in good condition?

What can you do to take care of your health? Why should a community spend money to keep people in good health? How can you help in this work?

Ewing Galloway

6. *Four-H pig club.*

Many thousands of farm boys and girls belong to Four-H Clubs. The purpose of these clubs is to develop the heart, the head, the hand, and the health of its members by learning to do well many useful kinds of work. Can you tell why the clubs are called Four-H Clubs?

Learning to do well such work as raising pigs or chickens, growing corn or flowers, canning food, and sewing should make boys and girls better citizens. Why? How may such useful hobbies develop, or improve, the heart, the head, the hand, and health?

Ewing Galloway

7. *At a boys' camp.*

Ewing Galloway

8. *At a girls' camp.*

Although camps like these are not Four-H Clubs, how do they develop the heart, the head, the hand, and health? What do members of a camp learn about living together?

C. P. Cushing from Ewing Galloway

9. *Public tennis courts.*

Ewing Galloway

10. *Playing baseball in a public park.*

In what ways will public playgrounds help boys and girls to become good citizens? How do group games train people to get along with each other?

lic libraries have many books, magazines, and newspapers which they loan for short periods to readers. People have the chance to get many things to read.) 7. Do you think children who play interesting and worth-while games and who read entertaining and useful books are likely to be happier and healthier than children who do not do these things? Why?

Picture No. 2. A community health center, or clinic.

1. What is a health center, or clinic? (Read legend below picture.) 2. Do you think health centers would be particularly helpful to people who could not pay for good medical advice or treatment of ailments? Why? 3. Why should people seek advice on health? 4. To whom can you go for advice? (School nurse, family physician, health center.)

Picture No. 3. Taking care of eyes in a health center.

1. Who pays the salaries of doctors and other workers in a health center? (People who live in the community where the center is located.) 2. Who pays for the medicine and other materials used in the center? (The people to whom the medicine and other aid is given.) 3. Who do you think will pay for the boy's glasses? (The boy's parents. In some health centers glasses are furnished free to children of parents who cannot afford to buy them.) 4. Do you think this is a good thing to do? Why? 5. What is the doctor doing to the boy's eyes? (Testing them to see if the boy needs glasses. The boy is probably reading a chart that is some distance away.)

Pictures Nos. 4 and 5. Treating the ear at a health clinic, and dental care at a clinic.

1. Why is it necessary for children to keep their eyes, ears, and teeth in good condition? (These organs are very useful, and they are very likely to be injured by improper care.) 2. Do you think the men and women in the clinic seem to be careful and pleasant workers? Why? (Pupils answer.) 3. Why should a community spend money to keep people in good health? (A

healthy member of a community is far more useful than an unhealthy one. An unhealthy person may easily catch and spread disease.) 4. What can you do to take care of your health? (Eat the right amount of the right kinds of food. Play games suited to your strength and skill. Sleep long hours in a well-ventilated room. Keep your body clean. Your parents, the school nurse, the doctor, and the health center can give you more help.) 5. What can you do to help make your community a healthful place in which to live? (Keep yourself as healthy as you can. Avoid people who are ill with a contagious disease. Keep away from other people when you are ill. Observe quarantine rules. Help to keep streets and alleys clean.) 6. Do you think the children in Pictures Nos. 3, 4, and 5 are looking after their health? Why? 7. Does the treatment they are receiving seem to be painful? Why?

Picture No. 6. Four–H Pig club.

1. What is the purpose of the Four–H clubs? (Read legend.) 2. Why are these clubs called Four–H clubs? 3. What are the boys in the picture doing? (Looking at hogs the members of the club have raised. Probably asking and answering questions about the proper care of hogs.) 4. How are Four–H clubs organized? (Organized among boys and girls by men and women who are employed to do this work.) 5. Do you think that learning to do well such work as raising pigs or chickens, growing corn or flowers, canning, and sewing should help to make boys and girls better citizens? Why? 6. How many boys and girls belong to Four–H clubs? 7. How may useful hobbies such as those developed in Four–H clubs improve the heart, the head, the hand, and the health? (Worth-while, healthful, interesting work develops one's health. Learning to do certain work well can develop skillful hands. By doing the work of Four–H clubs one gets new ideas and learns to think carefully. In much of the work done by Four–H clubs, boys and girls learn to be thoughtful of other people, and to take good care of animals.) 8. Do you think a community is doing a good thing when it hires someone to help boys and girls do such things as Four–H club work? Why?

Pictures Nos. 7 and 8. At a boys' camp, and At a girls' camp.

1. What are the boys and girls doing? (Boys are learning to swim and dive. Girls are learning handicrafts such as clay modeling and basket weaving.) 2. Is there an older person in each group who looks after the boys and girls, and who teaches them some of the things they wish to know? (Yes. An instructor and life guard stands on top of the diver's platform and gives the boys directions for swimming, diving, and playing water games, and watches to see that no one drowns. The girl on the right side of the table is giving instruction in clay work and basketry.) 3. Who pays the expenses of running camps for boys and girls? (Sometimes the communities where the boys and girls live, but more often the boys and girls or their parents pay the expenses.) 4. How do camps like these develop the heart, the head, the hand, and health? 5. What do members of a camp learn about living together? (Work together, play together, observe rules made for the good of all, plan camp activities.) 6. Do you think a community which provides camps for its boys and girls does a good thing? Why?

Picture No. 9. Public tennis courts.

1. Why do some communities build public tennis courts? (For people in the community to use.) 2. Why doesn't each person who wants to play tennis build his own court rather than help his community build courts? (A court costs too much; takes a large amount of space. Every player does not need a whole court. It is more sensible for a community to build courts which all people can use, and which are paid for by the contributions of everyone.)

Picture No. 10. Playing baseball in a public park.

1. Who owns the parks in your community? (All the people in the community.) 2. Do you think it is sensible for all the members of a community to co-operate and pay for the building and upkeep of parks? Why? 3. In what ways will public parks and playgrounds help boys and girls to become good citizens? (Public playgrounds and parks give boys and girls a place to play

and a chance to develop strong healthy bodies. They give boys and girls a chance to develop habits of handling public property carefully.) 4. How do group games train people to get along with each other? (They teach people to be considerate of each other, and to understand people.) 5. What group games do you play? What have you learned about people with whom you play?

D. Suggested Group Activities for Optional Use

1. Make a list of the things in your community that are owned by the community as a whole. Find out how the community acquired them.

2. Find out how the library in your town is managed, and how the money for supporting it is obtained.

3. Write down the different ways in which the community provides for the school you attend.

4. Decide with your teacher and classmates some of the things your school needs. What can be done about the problem of getting these things?

5. Find out where some of the summer camps for boys and girls are near where you live? What do the boys and girls do at these camps? How are expenses at these camps paid?

6. Write to the Department of Agriculture, Washington, D.C., to find out more about Four-H clubs.

III. Adaptability of Selections in the Unit for Use in the Development of Important Reading Habits and Skills

A. Order of Selections in the Unit

1. Citizens' Park, pages 417–432
2. Jed's Turkey, pages 434–447
3. The Household Fairy, page 449
4. The A.B.C. Club, pages 450–459
5. April's Christmas Silver, pages 461–474
6. How to Make a Town Grow, page 476
7. Helen Learns One Way to be a Good Citizen, pages 477–489
8. The Fatherland, page 491

B. Classification of Selections

The following chart indicates which selections are best suited for use in developing a given reading habit or skill.

Reading Habits and Skills	Selections							
	1	2	3	4	5	6	7	8
1. Getting the main ideas	x	x		x	x		x	
2. Reading for details	x	x		x	x		x	
3. Drawing conclusions	x	x		x	x		x	
4. Locating information								
5. Selecting material read	x	x		x	x		x	
6. Organizing ideas	x	x		x	x		x	
7. Remembering ideas	x	x		x	x		x	
8. Oral reading			x			x		x

IV. Teaching the Individual Selections

CITIZENS' PARK

pages 417-432

A. Introducing the Story

Raise and discuss the following questions:

1. Is there a park in our town? How did the town get the park? 2. For what do people use the park? 3. How do you think people who live in a town where there is no park can get one? Do you think children could help do this work? How?

B. Introductory Reading of the Story

The selection should be read silently. A suitable purpose is: *How did the boys and girls help to get a park for Millville?*

For some classes, the reading may need to be done in two parts. The first part may end on page 424. A suit-

able purpose for silent reading of this material is: *Why did Judge Pennington refuse to sell Pine Hill?*

The following questions may be used for discussion subsequent to the reading:

Page 417. For whom was the committee waiting?

Pages 418-419. 1. What two things did the committee want to discuss with the Judge? 2. Why was Millville a pleasant place in which to live? 3. Who gave Millville the money with which to buy land for a park? 4. Why was Pine Hill a good place for a park? 5. Why did the Judge not want children on Pine Hill?

Pages 420-421. 1. Why had the Junior Citizens' Club been organized? 2. What was the Junior Citizens' Park Committee? 3. What was Charlie's attitude about the work of the Park Committee?

Pages 422-423. 1. What did the Judge tell the boys? 2. Who was Alicia? What did she seem to think of the Junior Citizens?

Page 424. What did George think the boys would have to prove to the Judge?

The second division begins on page 425. A suitable purpose for silent reading of this material is: *How did the boys and girls save Pine Hill?*

The following questions may be used for discussion:

Page 425. Whom did the boys see after they had started to swim in the lake?

Pages 426-427. 1. What did Pud discover on the hill? 2. What plan did the boys use to put out the fire? 3. Why was it hard to fight the fire?

Pages 428-429. 1. What did Alicia do? 2. How did the other girls help? 3. What did the Judge see on his way to the fire?

Pages 430-431. 1. What did the fire chief think about the fire? What did the Judge think? 2. What did the Judge decide he would do?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. What did the boys and girls in this story do to keep their town? 2. Whom do you think was the poorest citizen in the group? Why? 3. Which members of the committee do you think took the most interest in the affairs of the committee? Why do you think so? 4. Why should each person take an interest in helping his town to get things it needs?

Other Activities: 1. Find out things that could be done in your town to make it better. Discuss these things. Decide whether you can do anything about them. 2. Tell your classmates of things you know that people have done to make their town better.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. The Junior Citizens' Park Committee was appointed to try to get Pine Hill as a site for a park. 2. Judge Pennington was eager to sell Pine Hill. 3. The boys had a picnic on Pine Hill. 4. The boys set fire to the grass on Pine Hill. 5. Judge Pennington was afraid that the boys would set fire to Pine Hill. 6. Judge Pennington had refused to sell Pine Hill. 7. The boys and girls put out the fire on Pine Hill. 8. The Judge decided to sell Pine Hill to the town. (True: 1, 3, 5, 6, 7, 8.)

2. *Reading for details* (Using pages 417–419)

1. Where was the committee waiting for the Judge? 2. Why was Pud embarrassed? 3. Where did the boys want to have their picnic? 4. What things had the people done to make Millville attractive? 5. How long had the people been talking about having a park? 6. Who had left money to buy the land? 7. Where was Pine Hill? 8. Where did the water in Clear Pond come from?

3. *Drawing conclusions*

1. Do you think Charlie Towne was a good citizen? What

makes you think so? 2. Do you think Alicia was a good citizen? Why? 3. Do you think the girls should have been left out of the Junior Citizens' Club? 4. Why do you think Judge Pennington felt that boys were careless? 5. Do you think Judge Pennington was a good citizen? Why?

4. *Selecting material read*

Find paragraphs that give answers to these questions:

1. Why was Pine Hill a good place for a park? 2. Why did Millville not already have a park? 3. What things did the boys and girls do to put out the fire? 4. What were Judge Pennington's ideas about boys and girls using Pine Hill? 5. What had people in Millville done about getting a park?

5. *Organizing ideas*

The second paragraph tells why Millville was a good place in which to live. Pupils may fill in this skeleton outline:

WHY MILLVILLE WAS A GOOD TOWN

I.

II. It had been made attractive

A.

B.

C.

D.

6. *Remembering ideas*

Find the ideas you would need to remember in order to tell what kind of a place Pine Hill was.

JED'S TURKEY

pages 434-448

A. Introducing the Story

Raise and discuss these questions:

1. Were you ever able to help your family when it needed help? What did you do? 2. In what ways do you think a boy who lives

on the farm can help his family? 3. Did you ever help your family to solve some special problem? 4. Do you know of any boy or girl who helped his family to get money they needed? What did he do?

B. Introductory Reading of the Story

This selection should be read silently. A suitable purpose is: *How did Jed help his family to solve a problem?*

The following questions are suggested for discussion:

Pages 434-435. 1. Why were the members of the Treadwell family feeling as they did? 2. What did Jed try to think of?

Pages 436-437. 1. What did Jed find on his way home from school the next day? 2. What did Jed find out from Sam Gregory about arrowheads? 3. What did he do that evening after school?

Pages 438-439. 1. What did Jed do early the next morning? 2. How long did Jed dig for arrowheads? 3. Where did he take them?

Pages 440-441. 1. What did Jed find out about turkeys on Saturday? 2. How much did he get for his arrowheads? Why did he sell them all? 3. What did he do with the money?

Pages 442-443. 1. What did Jed do with the turkey when he got home? 2. What did Jed's mother think about his buying a turkey?

Pages 444-445. 1. Why did Jed tell the story to Ronnie? 2. Who came for Thanksgiving dinner?

Pages 446-447. 1. What surprise did Ronnie have for Jed? 2. What did Jed do? 3. What did Mrs. Treadwell think about her two sons? 4. How did Jed feel after it was all over?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. Did Jed have to hunt for a way to help his family? 2. What work did he have to do before he was able to help them? 3. Why do you think Jed wanted to solve the problem by himself? 4. Do you think Jed was a good citizen in his family? Why?

Other Activities: 1. Pupils may read aloud to their classmates other stories which tell of boys and girls helping their family to solve its problems. 2. Pupils may tell of cases they know in which a boy or a girl has helped the family to solve a problem. 3. The class may make a list of ways in which boys and girls can help their families.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. The Treadwell family was confronted with a problem. 2. Jed wanted to be of help to his family. 3. The family was eager to please Ronnie. 4. Jed thought immediately of a way to solve the problem. 5. Jed got Betsy to help him solve the problem. 6. Jed had to work hard to solve the problem. 7. Ronnie was not concerned about what Jed had done. 8. Mrs. Treadwell felt that her sons were good citizens in the family. (True: 1, 2, 3, 6, 8.)

2. *Reading for details* (Using pages 434–436)

1. What were Betsy and her mother doing when Jed came into the kitchen? 2. What was Jed afraid might be wrong? 3. Why were the Treadwells not able to have a turkey? 4. Where was Ronnie? 5. Why couldn't Jed go to work? 6. Why couldn't Ronnie buy the turkey? 7. When had Ronnie found his arrowheads? 8. When did Jed show his arrowhead to Sam? 9. What kind of arrowhead had Jed found? 10. Why did Sam say that Jed was lucky?

3. *Drawing conclusions*

1. About how large do you think Jed's sweet-corn patch was? What makes you think so? 2. Do you think the members of the Treadwell family were thoughtful of each other? How do you know? 3. How do you think the arrowheads got into the ground on the Treadwell farm? 4. What do you think made Jed insist that Ronnie keep his arrowheads? 5. Do you think Ronnie was thoughtful of Jed? How do you know?

4. *Selecting material read*

Find sentences or paragraphs that give answers to these questions:

1. How did Jed hunt for arrowheads? 2. What work did Jed do on the farm? 3. What things did Jed buy with his money? 4. What was on the Thanksgiving dinner table? 5. What kind of arrowheads did Jed find?

5. *Organizing ideas*

Arrange these events in the order that they happened:

1. Jed went to town to buy a turkey. 2. Jed told Ronnie to keep his arrowheads. 3. Jed discovered that the family could not afford to buy a turkey. 4. Jed sold his arrowheads to Professor Sparling. 5. Jed found a white arrowhead. 6. Sam told Jed where he could sell arrowheads. 7. Jed bought a turkey. 8. Jed finished digging up the corn patch. (Correct order: 3, 5, 6, 8, 1, 4, 7, 2.)

6. *Remembering ideas*

Find ideas you would need to remember for telling how Jed made certain that he covered the entire corn patch in his digging.

THE HOUSEHOLD FAIRY

page 449

Individual pupils may read the poem aloud. The class may wish to read it in concert.

Allow opportunity for pupils to raise questions and to make comments, but do not quiz. The following questions may help:

1. Why is Mother a good citizen in the family? 2. What are some of the things she does to help the family?

THE A. B. C. CLUB

pages 450-459

A. Introducing the Story

Raise and discuss the following questions:

1. To what clubs do you belong? What are their purposes? 2. Is there a club that tries to find ways of making your school better? What has it done? 3. Can you think of anything that boys and girls could do to make your school better?

B. Introductory Reading of the Story

This story should be read silently. A suitable purpose is: *In what way were the boys and girls of the A.B.C. Club good citizens in their school?*

The following questions may be used for discussion:

Pages 450-451. 1. Where did Jim and Francis get the idea that their school needed a radio? 2. What did they think the school could do with it?

Pages 452-453. 1. What did Jim do to start work on getting a radio for the school? 2. Why did the group of boys and girls meet after school? 3. What plan did Edith have?

Pages 454-455. 1. What kinds of work did the A.B.C. Club offer to do? 2. How did the members let the public know that they wanted to work?

Pages 456-457. 1. How well did the people respond to the notice? 2. How much money had been earned in five weeks?

Pages 458-459. 1. What plan did the boys and girls make for presenting the radio to the school? 2. How did the school feel about what the A.B.C. Club had done?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. In what way was Jim a good citizen in his school? 2. Were the other members of the A.B.C. Club good citizens in their school? Why? 3. Did the boys and girls have to think to find a way to help their school? 4. Did they have to work to help their school?

Other Activities: 1. Decide how Jim's way of helping his school differed from Jed's way of helping his family. 2. Find and read aloud other stories of a group of boys and girls helping their school. 3. Find out some things that your class might do to make your school better. Plan how to get these things done.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. Francis was the first to think of the idea that the Hampton School needed a radio. 2. Jim knew how the school could get a radio. 3. Jim told his friends to meet to make plans for getting a radio. 4. The boys and girls discussed different things they might do to earn money. 5. The boys and girls organized a club. 6. The club members did odd jobs to earn money. 7. It took the club two months to earn enough money. 8. The school principal went to the city to buy the radio. 9. The A.B.C. Club gave a party at school. 10. Miss Williams presented the radio to the school. (True: 3, 4, 5, 6, 9.)

2. *Reading for details* (Using pages 451–452)

1. Where had Jim and his sister been? 2. What did the Sherwood School have that Hampton School did not have? 3. What had the boys and girls done at the party? 4. What did Jim and Francis do that evening? 5. When did Jim talk to his friends at school? 6. Where did the group meet after school? 7. How many were in the group? 8. Why did Isabel say that Ernest should not sell newspapers?

3. *Drawing conclusions*

1. Do you think the making and the distributing of the notice was a good thing to do? Why? 2. Do you think it was a good thing to have a party on the day that the radio was presented? Why? 3. Was it a good thing that Jim got other children to help earn the money? Why? 4. Do you think Isabel was right when she said that Ernest mustn't sell papers? Why? 5. Which boy or girl do you think had the hardest work to do?

4. *Selecting material read*

Find sentences or paragraphs that give answers to these questions:

1. What different ideas were suggested for earning money to buy the radio? 2. What happened at the different parties told about in the stories? 3. How was the radio presented to the school? 4. For what purpose was the radio to be used? 5. What work did Edith Ayres do?

5. *Organizing ideas*

Arrange the following events in the order that they happened:

1. The radio was bought. 2. The boys and girls discussed ways of earning money. 3. The members of the A.B.C. Club worked to earn money. 4. The radio was presented to the school. 5. Jim discovered that Hampton School needed a radio. 6. The A.B.C. Club was organized. 7. Jim talked to his friends about the possibility of getting a radio for the school. (Correct order: 5, 7, 2, 6, 3, 1, 4.)

6. *Remembering ideas*

Find ideas you would need to remember for telling what kinds of work the boys and girls actually did to earn money.

APRIL'S CHRISTMAS SILVER

pages 461-474

A. Introducing the Story

Raise and discuss the following questions:

1. What different things do Boy Scouts, Girl Scouts, and Campfire Girls do? 2. Do you know of a Boy Scout who did something special to help his troop? What did he do? 3. Do you know of a Girl Scout or a Campfire Girl who did something special to help her group? What did she do? 4. What are some of the things you think a Boy Scout could do to help his troop?

B. Introductory Reading of the Story

The story should be read silently. A suitable purpose is: *What did Bob Martin do to help his Boy Scout troop solve a problem?*

For some classes, the story may need to be read in two parts. The first section ends on page 467. A suggested purpose for silent reading of this material is: *Why was Bob left behind to wash the dishes?*

The following questions may be used for discussion:

Page 461. 1. Where was the patrol going? 2. Who was the tenderfoot?

Pages 462-463. 1. What was it that the boys wanted? 2. How much money did they need? 3. What were they talking about as they walked along the trail? 4. How had Mr. Robbins lost his money?

Pages 464-465. 1. Where was the boys' camping place? 2. What was the piling? What was it used for? How did the lumbermen use the "cat walk"? 3. What rule did the patrol have about washing the dishes?

Pages 466-467. What mistake did Bob make that caused him to be the dishwasher?

The second division begins on page 468. A suitable purpose for silent reading of this section is: *How was Bob able to help his patrol?*

The following questions may be used for discussion:

Pages 468-469. 1. Where did the boys go after dinner? 2. Where did Bob get water for his dishwashing? 3. What did he think he saw in the cake of ice? 4. How did he happen to lose his cap?

Page 470. 1. What did Bob see in the under side of the cake of ice? 2. What did he do in planning how to get the cake of ice ashore?

Pages 472-473. 1. What things made it difficult for him to get the cake of ice to land? 2. Why did the patrol return? 3. What

did the boys do when they heard that Bob had found the money?

Page 474. 1. How did Mr. Robbins think that the bag had been imbedded in the ice? 2. Why do you think Bob said that the reward should go to the troop? 3. What did the boys intend to do with the money?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. What was the difference between the way that Bob helped his scout troop and the way that Jed Treadwell helped his family? 2. What was the difference between the way that Bob helped his scout troop and the way that Jim Parsons helped his school?

Other Activities: 1. Find and read aloud other stories that tell about a boy or a girl who helped a club or some other organization to which he or she belonged solve a problem. 2. Decide what things you can do to help organizations to which you belong.

D. Rereading the Story for Specific Purposes

1. *Getting the main ideas*

Which of these sentences are true?

1. Bob Martin had been able to help his troop many times. 2. The patrol was going on a camping trip. 3. Bob had to wash the dishes. 4. The patrol was saving money to get land for a camping place. 5. Bob found the bag of money. 6. It was easy for Bob to get the cake of ice to the shore. 7. Bob wanted to keep the reward for himself. (True: 2, 3, 4, 5.)

2. *Reading for details* (Using pages 461–463)

1. Where did the boys in the patrol live? 2. What clothes did the boys wear? 3. Who was the leader of the patrol? 4. What kind of trees grew on the land that the boys wanted for a camping ground? 5. When did Mr. MacIntyre say that he would give the boys the land? 6. How much had the boys saved? 7. What ways had the boys thought of to get the rest of the money? 8. When had Mr. Robbins lost his money?

3. *Drawing conclusions*

1. Why do you think the boys carried hatchets? 2. Do you think Bob was an unselfish boy? Why? 3. Do you think Mr. Robbins was an unselfish man? Why? 4. Why do you think it would have been a mistake for Bob to pull the cake of ice toward him? 5. Why do you think the lumbermen had placed a chain along the top of the piling?

4. *Selecting material read*

Find paragraphs that give answers to these questions:

1. What things did Bob have to do to get the cake of ice to shore? 2. What things did the boys cook for dinner? 3. What equipment did the boys take with them? 4. How did Bob get water for washing dishes? 5. What is *piling* and how do lumbermen use it?

5. *Organizing ideas*

Arrange these events in the order that they happened:

1. The boys talked about needing more money before they could get the land. 2. Bob lost his cap. 3. All of the boys except Bob hiked up the river. 4. Mr. Robbins talked to the boys. 5. Bob washed the dishes. 6. Bob saw the satchel in the ice. 7. Bob said that the reward should go to the troop. 8. Bob pulled the cake of ice to shore. (Correct order: 1, 3, 5, 2, 6, 8, 4, 7.)

6. *Remembering ideas*

Find the ideas you would need to remember for telling how Bob was a good citizen in his group.

HOW TO MAKE A TOWN GROW

page 476

Individual pupils may read the poem aloud. The class may wish to read it in concert. Allow opportunity for discussion, but do not quiz. Pupils may have other poems

that tell how a town can be made better. These may be read aloud to the class.

HELEN LEARNS ONE WAY TO BE A GOOD CITIZEN

pages 477-489

A. Introducing the Story

Raise and discuss the following questions:

1. Are there any pests in your town that destroy trees or flowers? How do they do it? 2. What do the people do to protect the trees or flowers? Who does the work? 3. Do you think boys and girls could help to do this work? What could they do? 4. Do you think boys and girls should take part in helping their town to solve a problem? Why?

B. Introductory Reading of the Story

This selection should be read silently. A suitable purpose is: *How did Helen help her town to solve a problem?*

The following questions are suggested for discussion subsequent to the reading:

Page 477. 1. Where did the Carter family live? 2. What signs of spring had Tom seen?

Pages 478-479. 1. What insect had harmed the trees the year before? 2. What plans had been made to fight the gypsy moth this year?

Pages 480-481. 1. What had Helen heard about the plans? What did she think about them? Why did she feel as she did? 2. What did Bob Adams think about the plans?

Pages 482-483. 1. Why did Mr. Adams think it was difficult to get everyone in town interested in the problem? 2. Why did Harold think many people were not interested in the affairs of the town?

Pages 484-485. 1. How did the girl that Mrs. Carter told about help her club to solve a problem? 2. How had Helen's

class at school helped to get a typewriter? 3. How had Johnny Harris helped his family?

Pages 486-489. 1. What happened at school Saturday morning? 2. What work did the children do during the day? 3. How did Helen feel after the work was over?

C. Using the Story to Realize the Purpose of the Unit

Discussion: 1. In what way did Helen become a good citizen? 2. Did Helen think of a plan for solving a problem, or did she merely help to carry out another person's plan? 3. How was the way that she became a good citizen in her town different from the way that Jed was a good citizen in his family?

Other Activities: 1. Tell of things you know that children have done to help make their town better. 2. Find and read aloud stories about children taking an interest in their town. 3. Decide whether there is any way the school children can help to get something done in your town.

D. Rereading the Story for Specific Purposes

1. *Getting main ideas*

Which of these sentences are true?

1. The Town of Denton needed to protect its trees from the gypsy moth. 2. The Chamber of Commerce had made a plan for fighting the gypsy moth. 3. Many people planned to help do the work that needed to be done. 4. Helen was eager to help do the work. 5. Some of the men sprayed the trees. 6. The school children put cement in cavities in the trees. 7. All the school children were not as eager as Helen to help. 8. Sometimes a person must think of a way to help his group solve a problem. 9. People should never work together to solve a problem for the group. 10. Sometimes one accidentally finds a way to help his group. (True: 1, 2, 3, 5, 8, 10.)

2. *Reading for details* (Using pages 477–479)

1. How many people were in the Carter family? 2. What time of year did the story happen? 3. Where had Harry heard

about the gypsy moth? 4. When do gypsy-moth caterpillars hatch out? 5. What do the caterpillars do to the trees? 6. What poison was to be sprayed on the leaves? 7. Why was cement to be placed in cavities in the trees? 8. Where were the younger people to tie the strips of burlap? 9. Where do the moths lay eggs? 10. What was to be done to the caterpillars that were caught in the burlap?

3. *Drawing conclusions*

1. When trees in a town are attacked by a pest, do you think everyone should take care of his own trees? Why? 2. What do you think made Helen feel differently about helping her town to get things done? 3. Did the Adams family and the Carter family agree about good citizenship? How do you know? 4. Do you think most people take enough interest in the activities and problems of the groups to which they belong? What makes you think so? 5. Why should anyone who belongs to any group help to solve its problems?

4. *Selecting material read*

Find paragraphs that give answers to these questions:

1. What stories were told when the Adams family visited the Carters? 2. What steps need to be taken in helping a group to solve its problems? 3. What plans had been made to fight the gypsy moth? 4. What did Mr. Adams think a good citizen would do? 5. What work did the boys and girls do?

5. *Organizing ideas*

Pupils may fill in the following skeleton outline:

WORK DONE IN FIGHTING THE GYPSY MOTH

I. Spraying trees
II.
III.
    A.
    B.
    C.
IV.

6. *Remembering ideas*

Find ideas you would need to remember for telling what work the children were to do in fighting the gypsy moth.

THE FATHERLAND

page 491

Individual pupils may read the poem aloud. The class may wish to read it in concert. Provide opportunity for discussion if the pupils wish it.

V. Suggested Activities for the Unit as a Whole

1. Some of the pupils in the class may wish to organize a club for the purpose of getting something done in the community or in the school.

2. Pupils may decide upon the one thing that they think their town needs most. They may then decide whether they can do anything about the problem. If so, they may make plans to get the work done. Digging dandelions, putting kerosene in stagnant pools, cleaning rubbish from alleys and vacant lots, planting trees, flowers, and shrubs are examples of things to do.

3. Ask representatives from the public library, the city health center, and the city parks to talk to the class about these community institutions and their work.

4. Pupils may decide upon the one thing that needs to be done most for their school. They may then decide whether they can do anything about the problem. If so, plans should be made for carrying out the work.

5. Give pupils plenty of opportunity to tell of instances where boys and girls have actually done things to help a group to which they belong solve a problem or carry out an activity.

6. The class may appoint a committee to call upon town authorities to discover what plans are under consideration for improving the community.

VI. A Written Test on Basal Concepts

1. Tell one way in which you think a town can be made better.

2. Tell one way you think a boy or a girl can help his family.
3. Tell one way in which a boy or a girl can be a good citizen in any group to which he belongs.
4. Does a boy or a girl have to think of a way to help his group solve a problem to be a good citizen in his group?
5. Does a boy or a girl have to help do the work that needs to be done to be a good citizen in his group?
6. Can a boy or a girl help his group by himself?
7. Name three things that make a town a good town.
8. How are parks and playgrounds in cities supported?
9. In which stories in this unit did a boy or a girl work alone to help his group? In which story did the boy have to plan a way to solve the problem?
10. In which story did a boy or a girl help to carry out another person's plan?
11. Why should anyone help his group to solve any problem it has?
12. Name four groups to which you belong.

DATE DUE SLIP

F255	

O

PROPERTY

University of Alberta Library

0 1620 0196 0796